

**U.S. Department of the Interior
Bureau of Land Management
White River Field Office
220 E Market St
Meeker, CO 81641**

ENVIRONMENTAL ASSESSMENT

NUMBER: DOI-BLM-CO-110-2012-0018-EA

CASEFILE/GRAZING PERMIT NUMBER: 0504375

PROJECT NAME: Grazing Permit Revision and Reissuance for the Blacks Gulch Allotment #06612

LEGAL DESCRIPTION:

Legal Description						
Allotment		BLM Acres	Private Acres	Twp.	Range	Section(s)/Lots or Portions Of
Name	No.					
Blacks Gulch	06612	24,746	3,939	3N	96W	23-27, 31-36
				3N	95W	19, 29-33
				2N	97W	1, 12
				2N	96W	1-36
				2N	95W	6, 7, 18, 19
				1N	96W	2-5, 8-10

APPLICANT: LK Ranch Livestock LLC

PURPOSE & NEED FOR THE ACTION: The purpose of this action is to facilitate the orderly use of public lands for livestock grazing in accordance with the Taylor Grazing Act of 1934 as amended; the Federal Land Policy and Management Act of 1976 as amended; and the Public Rangelands Improvement Act of 1978. Implementation of the proponent's proposed grazing plan is expected to facilitate acceptable livestock management in the Blacks Gulch allotment #06612.

Decision to be Made: The BLM will decide whether to implement the Proposed Action or one of the other alternatives for issuance of a revised grazing permit on the Blacks Gulch allotment #06612.

SCOPING, PUBLIC INVOLVEMENT, AND ISSUES:

Scoping: Scoping was the primary mechanism used by the BLM to initially identify issues. Internal scoping was initiated when the project was presented to the White River Field Office

(WRFO) interdisciplinary team on November 29, 2011. External scoping was conducted by posting this project on the WRFO's on-line National Environmental Policy Act (NEPA) register on November 30, 2011.

Issues: No issues were identified during public scoping.

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES:

Background/Introduction: The Blacks Gulch Allotment (06612) is located approximately 20 miles west of Meeker on the north side of CO 64. The allotment extends from CO 64, northward to the ridge line of Colorow Mountain. NEPA document CO-110-2007-030-EA fully analyzed livestock grazing in the Blacks Gulch allotment. Refer to that document for additional information and analysis. Based on the EA listed above, a grazing permit was issued for the Blacks Gulch allotment in 2008 that could have remained in place until 2018; however in December 2010 the base property and private property associated with this allotment was sold. In January 2011 LK Ranch leased the base property and some of the private property within the allotment and made application for the grazing preference (CO-110-2011-052-CX) and a grazing permit (CO-110-2011-070-DNA).

LK Ranch grazed livestock in the allotment according to the current permit (outlined in Alternative B) during the 2011 grazing season but made lighter use and for a shorter duration than permitted. Having gained some familiarity with the allotment LK Ranch has made application for a grazing permit with revised grazing schedules to better meet the needs of their livestock operation while still allowing for improved forage and overall land health conditions.

Table 1. Allotment Included in Permit #0504375

Allotment Name	Number	BLM Acres	State Acres	Private Acres	Total Acres
Blacks Gulch	06612	24,746	0	~3939	28,685

Proposed Action (Alternative A):

Under the Proposed Action, cattle would enter the Blacks Gulch pasture on March 15 every year. Use in this pasture would be almost entirely prior to the start of the growing season so cattle would rely on forage produced the previous growing season. Cattle would then rotate through the remainder of the allotment grazing in each pasture for a maximum of 18 days, except the last pasture where they would graze for a maximum of 21 days. Total duration of grazing would be 92 days. Under the proposed grazing schedules livestock grazing would occur during a portion of the grazing period but every pasture would have the majority of the growing season for plants to re-grow after being grazed and to a lesser extent, grow prior to being grazed. Except for the Blacks Gulch pasture, the rotation through the allotment would vary every other year as shown in the grazing schedules below. The objective of this grazing plan is to graze the Blacks Gulch allotment 06612 in a sustainable rotational manner that meets the needs of the livestock operator while also allowing long term improvements in all aspects of rangeland health. Future adjustments in timing, intensity, and frequency of livestock grazing will be made, in cooperation with the livestock operator, if necessary to ensure progress is made toward this objective.

To maintain the permitted number of AUMs, line two of the proposed grazing permit shows 200 head of cattle from March 15 through June 15 as non-use. The current grazing schedules restrict grazing use to the active AUMs. The permittee has agreed that the balance of the AUMs will remain in non-use for resource benefit until future monitoring and assessments show that resource conditions warrant increasing active AUMs toward permitted levels (with a maximum of 1859).

Table 2. Proposed Grazing Permit

Allotment Number	Allotment Name	Livestock Number	Kind	Use Type*	Date On	Date Off	% PL	BLM AUMs
06612	Blacks Gulch	600	Cattle	A	3/15	6/15	76	1394
06612	Blacks Gulch	200	Cattle	N	3/15	6/15	76	465
Total								1859

*A=Active, N=Non-use

Table 3. Proposed Grazing Schedule – Even Years

Allotment 06612	Livestock		Date		Use Type*	Total AUMs	% PL	BLM AUMs	PVT AUMs
Pasture Name	Number	Kind	On	Off					
Blacks Gulch	600	C	3/15	4/1	A	355	93%	330	25
Middle	600	C	4/2	4/19	A	355	97%	344	11
Homestead Wray	600	C	4/20	4/26	A	138	41%	57	81
Oil Well Gulch	600	C	4/27	5/07	A	217	90%	195	22
Tschuddi Gulch	600	C	5/08	5/25	A	355	58%	206	149
Scenery Gulch	600	C	5/26	6/15	A	414	75%	311	103
Totals:						1834		1443	391

Table 4. Proposed Grazing Schedule – Odd Years

Allotment 06612	Livestock		Date		Use Type*	Total AUMs	% PL	BLM AUMs	PVT AUMs
Pasture Name	Number	Kind	On	Off					
Blacks Gulch	600	C	3/15	4/1	A	355	93%	330	25
Homestead Wray	600	C	4/2	4/8	A	138	41%	57	81
Oil Well Gulch	600	C	4/9	4/19	A	217	90%	195	22
Middle	600	C	4/20	5/07	A	355	97%	344	11
Scenery Gulch	600	C	5/08	5/25	A	355	75%	266	89
Tschuddi Gulch	600	C	5/26	6/15	A	414	58%	240	174
Totals:						1834		1432	402

Plan of Operation: Each spring, 30 days prior to turnout within the allotment, the permittee will submit a plan of operation (grazing application) for the grazing year for the BLM to approve. The plan of operation will include anticipated turnout dates, number of animals, and the sequence the Pastures will be used for the year.

Limits of Flexibility: With prior approval from the Authorized Officer, livestock may be turned out as much as two weeks early or two weeks late to adjust to annual climate variations.

Livestock use days would also shift accordingly so overall allotment use remains within permitted timeframes. The permittee will also be allowed to adjust animal numbers +/-10 percent from the annual plan of operation provided the total AUM's do not exceed the AUMs scheduled.

Monitoring and Evaluation: Refer to CO-110-2007-30-EA for detailed discussion. Long term trend monitoring, utilization studies, riparian assessments and Grazing Response Index (GRI) will occur as determined necessary to assess rangeland conditions.

Rangeland Improvements Necessary to Implement the Grazing System: No rangeland improvements (RI) are proposed to implement the proposed grazing system. Future evaluations of allotment conditions may identify improvements that may aid in achieving objectives and those projects would be analyzed in future Environmental Assessment (EA) documents on a site specific basis. Maintenance of existing RI (e.g., removal of excess sediment from reservoirs, fencing of spring sources, maintaining fences, etc.) would facilitate improved livestock distribution and associated grazing practices, reducing livestock grazing related impacts to rangelands.

Grazing Permit Terms and Conditions:

The following other terms and conditions would be included in the grazing permit issued under this alternative:

1. Livestock grazing use will occur as outlined in the Proposed Action grazing schedules (Allotment Management Plan) portion of the Environmental Assessment document CO-110-2012-0018-EA that analyzes grazing on the Blacks Gulch Allotment.
2. The permittee or lessee must provide reasonable administrative access across private and leased lands to the BLM for the orderly management and protection of the public lands, as outlined 43 CFR 4130.3-2(h).
3. In order to improve livestock distribution on the public lands, no salt blocks and/or mineral supplements will be placed within a 1/4 mile of any riparian area, wet meadow, or watering facility (either permanent or temporary) unless stipulated through a written agreement or decision in accordance with 43 CFR 4130.3-2(c).
4. The permittee shall submit an Actual Use form within 15 days after completing their annual grazing use as outlined in 43 CFR 4130.3-2(d).
5. The permittee shall submit an Actual Use form within 15 days after completing their annual grazing use as outlined in 43 CFR 4130.3-2(d).
6. Livestock grazing on the Blacks Gulch allotment will be managed to achieve the Standards for Public Land Health in Colorado. If the proposed intensive, early livestock use results in undesirable impacts to soils the grazing schedules will be modified to minimize this impact.

The following mandatory terms and conditions as required by 43 CFR 4130.3 would be included in the grazing permit issued under this alternative:

1. Grazing permit or lease terms and conditions and the fees charged for grazing use are established in accordance with the provisions of the grazing regulations now or hereafter approved by the Secretary of the Interior.
2. This grazing permit is subject to cancellation, in whole or in part at any time because of:
 - a) Noncompliance by the permittee/lessee with rules and regulations now or hereafter approved by the Secretary of the Interior.
 - b) Loss of control by the permittee/lessee of all or a part of the property upon which it is based.
 - c) A transfer of grazing preference by the permittee/lessee to another party.
 - d) A decrease in the lands administered by the Bureau of Land Management within the allotment(s) described herein.
 - e) Repeated willful unauthorized grazing use.
3. This grazing permit/lease is subject to the terms and conditions of an allotment management plan if such plan has been prepared. If an allotment management plan has not been prepared, it must be incorporated in this permit/lease when completed.
4. The permittee/lessee must own or control and be responsible for the management of the livestock authorized to graze under this grazing permit/lease.
5. The authorized officer may require counting and/or additional or special marking or tagging of the livestock authorized to graze under this grazing permit/lease.
6. The permittee/lessee grazing case file is available for public inspection as required by the Freedom of Information Act.
7. This grazing permit/lease is subject to the provisions of executive Order NO. 11246 of September 24, 1964, as amended, which sets forth nondiscrimination clauses. A copy of this order may be obtained from the authorized officer.
8. Livestock grazing use that is different from that authorized by a permit or lease must be applied for prior to the grazing period and must be filed with and approved by the authorized officer before grazing use can be made.
9. Billing notices are issued which specify fees due. Billing notices, when paid become a part of the grazing permit or lease. Grazing use cannot be authorized during any period of delinquency in the payment of amounts due, including settlement for unauthorized use.
10. The permittee is responsible for informing all persons who are associated with the allotment that they will be subject to prosecution for knowingly disturbing archaeological

sites or for collecting artifacts. If archaeological materials are discovered as a result of operations under this authorization, the permittee must immediately contact the appropriate BLM representative.

11. Pursuant to 43 CFR 10.4(g), the permittee must notify the AO, by telephone and written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(c) and (d), the permittee must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the AO.
12. Grazing fee payments are due on the date specified on the billing notice and must be paid in full within 15 days of the due date, except as otherwise provided in the grazing permit or lease. If payment is not made within that time frame, a late fee (the greater of \$25 or 10 percent of the amount owed but not more than \$250) will be assessed.
13. No Member of or Delegate to, Congress or Resident Commissioner, after his/her election of appointment, or either before or after he/she has qualified, and during his/her continuance in office, and no officer, agent, or employee of the Department of the Interior, other than members of Advisory committees appointed in accordance with the Federal Advisory Committee Act (5 U.S. C. App. 1) and Sections 309 of the Federal Land Policy and Management Act of 1976 (43 U.S. C. 1701 et sec.) shall be admitted to any share or part in a permit or lease, or derive any such benefit to arise therefrom; and the provision of Section 3741 Revised Statute (41 U.S. C. 22), 18 U.S.C. Sections 431-433, and 43 CFR Part 7, enter into and form a part of a grazing permit or lease so far as the same may be applicable.
14. This grazing permit conveys no right, title or interest held by the United States in any lands or resources.
15. This permit is subject to (a) modification, suspension or cancellation as required by land plans and applicable law; (b) annual review and modification of terms and conditions as appropriate; and (c) the Taylor Grazing Act, as amended, the Federal Land Policy and Management Act, as amended, the Public Rangelands Improvement Act, and the rules and regulations now or hereafter promulgated thereunder by the Secretary of Interior.

Continuation of Current Management (Alternative B):

Continuation of the grazing schedules currently authorized would result in livestock grazing from April 25 through October 1 on even years totaling 159 days. On odd years grazing would occur from May 25 through October 10 totaling 138 days. With the exception of the smallest pasture where on odd years livestock would only be for four days, the number of days each pasture would be grazed would range from 18 to 83 days. Refer to CO-110-2007-30-EA page 4 for detailed analysis of these grazing schedules, listed as the Proposed Action alternative in that document.

Table 5. Current Grazing Permit

Allotment Number	Allotment Name	Livestock	Kind	Date On	Date Off	% PL	BLM AUMs
06612	Blacks Gulch	425	C	4/25	10/10	79	1865

Table 6. Current Grazing Schedule – Even Years

Blacks Gulch Allotment #06612 (Even Year)									
Pasture	Livestock		Date		Use Type*	Total AUMs	% PL	BLM AUMs	PVT AUMs
	#	Kind	On	Off					
Blacks Gulch	325	C	4/25	6/5	A	449	93%	417	32
Homestead	100	C	5/1	5/18	A	59	27%	16	43
Wray	100	C	5/19	6/30	A	141	55%	78	63
Middle	325	C	6/6	7/10	A	374	97%	363	11
Middle	100	C	7/1	7/10	A	33	97%	32	1
Scenery Gulch	325	C	7/11	8/22	A	459	75%	345	114
Tschuddi Gulch	325	C	8/23	10/1	A	427	58%	248	179
Oil Well Gulch	100	C	7/11	10/1	A	273	90%	246	27
Totals:						2215		1745	264

Table 7. Current Grazing Schedule – Odd Years

Blacks Gulch Allotment #06612 (Odd Year)									
Pasture	Livestock		Date		Use Type*	Total AUMs	% PL	BLM AUMs	PVT AUMs
	#	Kind	On	Off					
Homestead	425	C	5/25	5/28	A	56	27%	15	41
Wray	425	C	5/29	6/7	A	140	55%	77	63
Blacks Gulch	425	C	6/8	7/1	A	335	93%	312	23
Middle	425	C	7/2	7/20	A	265	97%	258	7
Oil Well Gulch	425	C	7/21	8/9	A	279	90%	252	27
Tschuddi Gulch	425	C	8/10	9/10	A	447	58%	259	188
Scenery Gulch	425	C	9/11	10/10	A	419	75%	314	105
Totals:						1941		1487	327

Grazing Permit Terms and Conditions:

The following terms and conditions as required by 43 CFR 4130.3 would be included in the grazing permit issued under this alternative:

1. The permittee or lessee must provide reasonable administrative access across private and leased lands to the BLM for the orderly management and protection of the public lands, as outlined 43 CFR 4130.3-2(h).
2. The permittee is responsible for informing all persons who are associated with the allotment that they will be subject to prosecution for knowingly disturbing archaeological sites or for collecting artifacts. If archaeological materials are discovered as a result of operations under this authorization, the permittee must immediately contact the appropriate BLM representative.
3. Pursuant to 43 CFR 10.4(g), the permittee must notify the AO, by telephone and written confirmation, immediately upon the discovery of human remains, funerary items, sacred

objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(c) and (d), the permittee must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the AO.

4. This grazing permit/lease is subject to the provisions of executive Order NO. 11246 of September 24, 1964, as amended, which sets forth nondiscrimination clauses. A copy of this order may be obtained from the authorized officer.
5. The authorized officer may require counting and/or additional/special marking or tagging of the livestock authorized to graze under this grazing permit/lease.
6. In order to improve livestock distribution on the public lands, no salt blocks and/or mineral supplements will be placed within a 1/4 mile of any riparian area, wet meadow, or watering facility (either permanent or temporary) unless stipulated through a written agreement or decision in accordance with 43 CFR 4130.3-2(c).
7. In accordance with 43 CFR 4130.8-1(f): Failure to pay grazing bills within 15 days of the due date specified in the bill shall result in a late fee assessment. Payment made later than 15 days after the due date, shall include the appropriate late fee assessment. Failure to make payment within 30 days may be a violation of 43 CFR Sec. 4140.1(b) (i) and shall result in action by the authorized officer under 43 CFR Sec. 4150.
8. As outlined in the 1997 White River Record of Decision and Approved Resource Management Plan (ROD/RMP), utilization rates of key forage plant species by livestock, as determined by the BLM (i.e., Western wheatgrass, needle and thread grass Letterman needlegrass), will be limited to: 1) 40% averaged utilization for the grazing period from April 1 to June 15 each grazing year for key forage plants, 2) 40-60% averaged utilization on key forage plants for the grazing period from June 16 through September 14 each grazing year, 3) 60% averaged utilization of key forage plants for the grazing period September 15 to March 31 each grazing year.
9. Livestock grazing on the Blacks Gulch allotment will be managed to achieve the Standards for Public Land Health in Colorado.
10. Maintenance of all structural rangeland improvements (RI) and other projects are the responsibility of the permittee to which they have been assigned. Maintenance will be in accordance with cooperative agreements and/or range improvement permits (43 CFR 4120.3-1). Failure to maintain assigned projects in a satisfactory/functional condition may result in withholding authorization to graze livestock until maintenance is completed. Construction of new RI on BLM administered lands is prohibited without approval from the authorized officer.
11. The permittee shall submit an Actual Use form within 15 days after completing their annual grazing use as outlined in 43 CFR 4130.3-2(d).

12. Livestock use will occur as outlined in the Allotment Management Plan portion of the Environmental Assessment document CO-110-2007-30-EA that analyzes grazing on the Blacks Gulch Allotment.

No Livestock Grazing (Alternative C): No livestock grazing would be authorized on the Blacks Gulch allotment where it is currently permitted. The grazing permit held by LK Ranch Livestock LLC (0504375) would not be reissued. This alternative would not be in compliance with the White River Field Office ROD/RMP decision to provide for livestock grazing as one of the acceptable multiple uses. For comparison purposes this alternative will be analyzed through this document though may be incorporated by reference to CO-110-2007-30-EA.

ALTERNATIVES CONSIDERED BUT NOT CARRIED FORWARD: In January 2008 the permittee protested and appealed the BLM's Final Decision for issuance of a revised grazing permit for the Blacks Gulch allotment. As a result of a civil suit filed by the permittee in a settlement agreement was signed by the permittee and BLM in November 2008 whereby both parties agreed to allow a team of experts (Section 8) to review the technical issues and make a recommendation for a revised grazing plan for the Blacks Gulch allotment. The Section 8 Team made its final recommendation for a revised grazing plan for the allotment in April 2010. This grazing plan was tailored to meet the needs of the current permittee while still allowing improvements in rangeland conditions in the allotment. The plan would have required at least one large range improvement project, extensive monitoring by the BLM, and committed the livestock operator to intensive and specific livestock management.

The BLM began analyzing this proposal but in December of 2010 the permittee sold his base property and lost the BLM grazing permit. In January 2011 LK Ranch acquired the base property associated with the Blacks Gulch allotment and made application for the grazing preference. The preference was transferred and the current (2008) grazing permit was issued to LK Ranch in March 2011. Because the Section 8 Team's proposed grazing plan was developed specifically for and tailored to meet the needs of the previous operator and it would not meet the needs of the current livestock operator it will not be carried forward for analysis.

PLAN CONFORMANCE REVIEW: The Proposed Action is subject to and has been reviewed for conformance with the following plan (43 CFR 1610.5, BLM 1617.3):

Name of Plan: White River Record of Decision and Approved Resource Management Plan (White River ROD/RMP).

Date Approved: July 1, 1997

Decision Number/Page: Page 2-23

Decision Language: *"With minor exceptions, livestock grazing will be managed as described in the 1981 Rangeland Program Summary (RPS). That document is the Record*

of Decision for the 1981 White River Grazing Management Final Environmental Impact Statement (Grazing EIS). ”

AFFECTED ENVIRONMENT & ENVIRONMENTAL CONSEQUENCES

Standards for Public Land Health: Refer to CO-110-2007-30-EA, page 14 for a more detailed description of the following summary. In January 1997, the Colorado BLM approved the Standards for Public Land Health. These standards cover upland soils, riparian systems, plant and animal communities, special status species, and water quality. Standards describe conditions needed to sustain public land health and relate to all uses of the public lands. Because a standard exists for these five categories, a finding must be made for each of them in an environmental analysis (EA). The Summary of Assessment of the Standards for Public Land Health table can be found on page 15 of CO-110-2007-30-EA. It summarizes the results of Land Health Assessments conducted in 2006. Approximately 2,800 acres, about 13 percent of the public land, were not meeting Land Health Standards for Upland Soils (Standard 1), Plant and Animal Communities (Standard 3), and Special Status, T&E species (Standard 4). The majority of riparian systems were also not meeting standards (Standard #2). Historic and recent livestock grazing practices were identified as the general causal factors. Grazing during the critical growth period, heavy utilization of forage species, altered and degraded plant communities, excessive overland flow and associated erosion, and degraded soils were identified as specific concerns in these areas.

The expected improvements to Land Health for Alternative B, (Continuation of Current Management), above were described in CO-110-2007-30-EA, page 14 (as the Proposed Action). Reductions in overall livestock grazing, especially during the growing season would likely improve conditions throughout the uplands which would also benefit riparian channels. Improvements would be the result of reduced utilization levels, increased plant litter and improved plant community composition and perennial plant cover.

Expected improvements to Land Health for Alternative A (Proposed Action) would be similar. Duration of grazing use, especially during the growing season would be reduced for every part of the allotment. Forage plants would have regrowth opportunity after the grazing period, which would benefit plant community health and increase amounts of plant litter to protect soil surfaces and slow runoff. Soils will be monitored especially in the first few years of this grazing schedule because the early use when soils are saturated has potential to create excessive soil disturbance.

Cumulative Effects Analysis Assumptions: Cumulative effects are defined in the Council on Environmental Quality (CEQ) regulations (40 CFR 1508.7) as “...the impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions.” Table 8 lists the past, present, and reasonably foreseeable future actions within the area that might be affected by the Proposed Action; for this project the area considered was the Blacks Gulch Allotment #06612. However, the geographic scope used for analysis may vary for each cumulative effects issue and is described in the Affected Environment section for each resource.

Table 8. Past, Present, and Reasonably Foreseeable Actions

Action Description	STATUS		
	Past	Present	Future
Livestock Grazing	X	X	X
Wild Horses	No	No	No
Recreation	X	X	X
Invasive Weed Inventory and Treatments	X	X	X
Range Improvement Projects : Water Developments, Fences & Cattleguards	X	X	X
Wildfire and Emergency Stabilization and Rehabilitation	X	X	X
Wind Energy Met Towers			X
Oil and Gas Development: Well Pads, Access Roads, Pipelines, Gas Plants, Facilities	X	X	X
Power Lines	X	X	X
Seismic	X	X	X
Vegetation Treatments	X	X	X

Affected Resources:

The CEQ Regulations state that NEPA documents “must concentrate on the issues that are truly significant to the action in question, rather than amassing needless detail” (40 CFR 1500.1(b)). While many issues may arise during scoping, not all of the issues raised warrant analysis in an environmental assessment (EA). Issues will be analyzed if: 1) an analysis of the issue is necessary to make a reasoned choice between alternatives, or 2) if the issue is associated with a significant direct, indirect, or cumulative impact, or where analysis is necessary to determine the significance of the impacts. Table 2 lists the resources considered and the determination as to whether they require additional analysis.

Table 9. Resources and Determination of Need for Further Analysis

Determination ¹	Resource	Rationale for Determination
Physical Resources		
PI	Air Quality	Refer to CO-110-2007-30-EA page 16 and see analysis below
NI	Geology and Minerals	There would be no substantial affects incurred to the mineral and geologic resources from the permit revision and issuance.
PI	Soil Resources*	Refer to CO-110-2007-30-EA page 51 and see analysis below.
PI	Surface and Ground Water Quality*	Refer to CO-110-2007-30-EA page 35 and see analysis below.
Biological Resources		
PI	Wetlands and Riparian Zones*	Refer to CO-110-2007-30-EA page 40 and see analysis below.
PI	Vegetation*	Refer to CO-110-2007-30-EA page 59 and see analysis below.
PI	Invasive, Non-native Species	Refer to CO-110-2007-30-EA page 21 and see analysis below.
PI	Special Status Animal Species*	Refer to CO-110-2007-30-EA page 31 and see analysis below for Proposed Action.
NP	Special Status Plant Species*	There are no special status plant species known to inhabit the area within the Blacks Gulch Allotment.
PI	Migratory Birds	Refer to CO-110-2007-30-EA page 27 and see analysis below for Proposed Action.

Determination¹	Resource	Rationale for Determination
PI	Aquatic Wildlife*	Refer to CO-110-2007-30-EA page 77 and see analysis below for Proposed Action.
PI	Terrestrial Wildlife*	Refer to CO-110-2007-30-EA page 78 and see analysis below for Proposed Action.
NP	Wild Horses	The allotment associated with the proposed grazing permit is located more than ten miles from the Piceance-East Douglas Herd Management Area (PEDHMA). There would be no related impacts to the wild horses in the PEDHMA.
Heritage Resources and the Human Environment		
PI	Cultural Resources	See analysis below.
PI	Paleontological Resources	See analysis below.
NP	Native American Religious Concerns	No Native American religious concerns are known in the area.
NI	Visual Resources	The alternatives are consistent with the existing visual character of the area and will not introduce any discernible change.
NP	Hazardous or Solid Wastes	There are no known hazardous materials, wastes, or dump sites known within the allotment. No listed or extremely hazardous materials are proposed for use in any of the alternatives. Applications of pesticides would be in compliance with BLM requirements and allowed under a separate authorization. If the permittee suspects the release of any chemical, oil, solid waste, petroleum product, or sewage within the allotment, contact the BLM WRFO Hazardous Materials Coordinator at (970) 878-3800 and/or the Colorado Department of Public Health and Environment (CDPHE) at 1(877)518-5608.
NI	Fire Management	Grazing will reduce “flashy” fuels. There would be no negative impacts to fire management.
NI	Social and Economic Conditions	There would not be any substantial changes to local social or economic conditions.
NP	Environmental Justice	According to the most recent Census Bureau statistics (2000), there are no minority or low income populations within the WRFO.
Resource Uses		
PI	Forest Management	See discussion below.
PI	Rangeland Management	Refer to CO-110-2007-30-EA page 90 and see analysis below
NI	Floodplains, Hydrology, and Water Rights	Floodplains of tributaries to the White River will be grazed but are not expected to be impacted in their ability to reduce the energy of flood flows and store flood waters beyond current conditions. Hydrology and Water Rights are not expected to be impacted since grazing will meet public land health standards and there are no new range improvements that would provide stock water.
NI	Realty Authorizations	Right-of-Ways present, however, no impacts would be expected.
PI	Recreation	See discussion below.
NI	Access and Transportation	The modification of the grazing schedule and possible future introduction of additional livestock are not anticipated to impact access and transportation in the area.

Determination ¹	Resource	Rationale for Determination
NP	Prime and Unique Farmlands	There are no Prime and Unique Farmlands within the project area.
Special Designations		
PI	Areas of Critical Environmental Concern	See discussion below.
PI	Wilderness	See discussion below.
NP	Wild and Scenic Rivers	There are no Wild and Scenic Rivers in the WRFO.
NP	Scenic Byways	There are no Scenic Byways within the project area.

¹ NP = Not present in the area impacted by the Proposed Action or Alternatives. NI = Present, but not affected to a degree that detailed analysis is required. PI = Present with potential for impact analyzed in detail in the EA.

* Public Land Health Standard

AIR QUALITY

Affected Environment: The Proposed Action is an attainment area for national and state air quality standards, based on a review of designated non-attainment areas for criteria pollutants, published by the Environmental Protection Agency (EPA 2011). The Proposed Action is also located more than 10-miles from any special designation airsheds or non-attainment areas. Non-attainment areas are areas designated by U.S. Environmental Protection Agency (EPA) as having air pollution levels that persistently exceed the national ambient air quality (NAAQ) standards. Projects that could impact special designation areas and/or non-attainment areas may require special consideration from the Colorado Department of Public Health and Environment (CDPHE) and the EPA. The closest special designation areas are Dinosaur National Monument which is located northwest of the project area (designated Class II airshed with Prevention of Significant Deterioration (PSD) with thresholds for sulfur oxides and visibility), and the Mount Zirkel and Flat Tops Wilderness Areas located to north and east of the Proposed Action (designated Class I areas). The closest non-attainment areas would be located near Denver on the Front Range and would not be impacted by this project.

The Proposed Action is in Rio Blanco County within the Western Counties Monitoring Region of Colorado. The 2010 CDPHE monitoring assessment showed the air quality monitoring stations in the western Counties region (APCD 2010). Local air quality parameters including particulates are being measured at monitoring sites located at Meeker, Rangely, Dinosaur and Ripple Creek Pass near the Flat Tops Wilderness Area. The closest location for an Interagency Monitoring of Protected Visual Environments (IMPROVE) site is near the Flat Tops Wilderness, northeast of the Project Area. IMPROVE sites measure visibility impairment from air borne particles.

Environmental Consequences of the Proposed Action (Alternative A):

Direct and Indirect Effects: This Proposed Action would authorize livestock grazing in the Blacks Gulch allotment located in rural northwest Colorado in the White River Basin. The grazing plan in the Proposed Action calls for an earlier and shorter duration grazing schedule

than what was analyzed in CO-110-2007-030. The environmental consequences to air quality from Alternative A would include the periodic and local production of dust due to cattle trailing to and from forage and water sources and when moving cattle to new pastures. Dust levels may be noticeable locally and especially during drier times. The Colorado Air Pollution Control Division (APCD) estimates the maximum PM₁₀ levels (24-hour average) in rural portions of western Colorado to be near 50 micrograms per cubic meter (µg/m³). The increase in airborne particulate matter expected from the Proposed Action is not expected to exceed Colorado ambient air quality (CAAQ) or NAAQ standards on an hourly, 8-hour average or daily basis.

Cumulative Effects: Statewide, more than 70 percent of PM₁₀ (coarse particles) are created from windblown dust and soil from roads, fields and construction sites. A smaller percentage of coarse particles comes from automobile and diesel engine exhaust, soot from wood fires, and sulfates and nitrates from combustion sources such as industrial boilers (CAQCC 2011). Industrial facilities in White River Basin include coal mines, soda ash mines, and natural gas processing plants. Due to these industrial uses, increased population, and oil and gas development in this region, emissions of air pollutants in the White River Basin due to exhaust emissions and dust (particulate matter) are likely to increase into the future. Despite increases in emissions, overall air quality conditions in the White River Basin are likely to continue to be good for some time due to effective atmospheric dispersion conditions and limited transport of air pollutants from outside the area.

Environmental Consequences of Continuation of Current Management (Alternative B):

Direct and Indirect Effects: The grazing schedule was analyzed in CO-110-2007-030. As with the Proposed Action, the environmental consequences to air quality from Alternative A would include the periodic and local production of dust due to cattle trailing to and from forage and water sources and when moving cattle to new pastures. Dust levels may be noticeable locally and especially during drier times. The increase in airborne particulate matter from current management would not exceed CAAQ or NAAQ standards on an hourly, 8-hour average or daily basis.

Cumulative Effects: Impacts of the continuation of current management along with other activities in the basin are likely to increase the emission of particulate matter, but overall air quality conditions in the White River Basin are likely to continue to be good for some time due to effective atmospheric dispersion conditions and limited transport of air pollutants from outside the area.

Environmental Consequences of No Livestock Grazing (Alternative C):

Direct and Indirect Effects: Impacts from the no-action alternative would result in no dust production due to grazing activities.

Cumulative Effects: Overall air quality conditions in the White River Basin are likely to continue to be good for some time due to effective atmospheric dispersion conditions and limited transport of air pollutants from outside the area with or without grazing in this allotment.

Mitigation: None Identified.

SOIL RESOURCES

Affected Environment: Refer to CO-110-2007-30-EA, page 51 for a more detailed description of the following summary. Land Health Assessments were conducted in 2006 throughout a variety of ecological sites in the Blacks Gulch allotment. Approximately 2,800 acres, mostly rolling loam and alkaline slope range sites in the Blacks Gulch, Middle, and Homestead pastures were identified as not meeting Standard 1, primarily due to livestock grazing factors. Insufficient vegetative cover was contributing to reduced soil surface protection and reduced permeability to water infiltration. An additional 3,900 acres showed potential for decline in desired plant community composition without proper management. Composition in some areas had shifted from understories dominated by perennial herbaceous plant species to invasive annuals with small shallow root systems that are less effective at stabilizing soils.

Soils in the lower pastures of the allotment (Blacks Gulch, Homestead, and Middle) are finer textured and clayey. These soils tend to freeze in the late fall (November) and thaw intermittently in the spring (March). Soils in the upper elevation pastures (Oil Well Gulch, Tschuddi, and Scenery) are more variable with fewer clayey sites. At the higher elevations soils generally freeze a couple of weeks sooner in the fall and begin to thaw a few days later in the spring. As snow melts in the spring and soils begin to thaw they are saturated and soft.

Environmental Consequences of the Proposed Action (Alternative A):

Direct and Indirect Effects: Under this alternative livestock would graze the allotment in the spring and early summer for a total (BLM and private) of 1,834 AUMs. Duration of grazing would be 92 days. Grazing would begin on or around March 15 and last until June 15. Duration of grazing by pasture would range from seven to 21 days but the average duration would be approximately 16 days.

In the Blacks Gulch pasture livestock grazing use would be at the same time every year. Soils would generally be frozen but would thaw out and be muddy during the day. In the other lower pastures (Middle, Homestead / Wray) soil conditions would be similar to those in the Blacks Gulch pasture but the use period would alternate every other year. Hoof impact and trampling during wet soil conditions has potential to produce soil surface disruption, compaction, reduced infiltration, increased sediment loss, damage to the roots of forage plants, and reduced forage yields (Vallentine 158, 2001). The degree of these impacts and the amount of recovery during the non-grazed period is not yet known. In the upper pastures (Oil Well Gulch, Tschuddi, Scenery) grazing would occur early in the growth period but at alternating times every other year. Soils in the upper pastures would likely still be somewhat wet during the use periods but because of their texture and composition they would be less prone to the potential soil impacts discussed for the lower pastures. Vegetation in all pastures would have growing season opportunity, likely with some residual soil moisture, for regrowth after the grazing period.

Cumulative Effects: Past and present land uses such as oil and gas development and livestock grazing are expected to continue to occur in the future. These uses will include surface disturbance ranging from complete removal of soils for construction and development of oil and gas pads and infrastructure at localized sites and to varying levels of soil disturbance associated with livestock trailing and trampling. Potential impacts associated with oil and gas development

should be addressed with project specific BMPs. Vegetation would have opportunity for regrowth after the use period. Litter accumulation throughout the uplands should increase resulting in improved soil surface protection and improved infiltration. The level of impacts to soils and the amount of recovery during the non-grazed period is not clear at this time, however cumulative negative impacts from the Proposed Action are not expected. If soils do not recover adequately each year during the non-grazed period, especially in the lower pastures there would be potential for increased compaction and sediment loss affecting long-term soil productivity. If monitoring shows this to be the case corrective action (changing the grazing schedules) would be necessary.

Environmental Consequences of Continuation of Current Management (Alternative B):

Direct and Indirect Effects: Refer to CO-110-2007-30-EA page 55 for detailed analysis of this alternative, listed as the Proposed Action alternative in that document. Under this alternative livestock would graze the allotment from spring through fall for an average total (BLM and private) of 2,078 AUMs. Duration of grazing would be 149 days. Grazing would begin alternately in late April or in late May and last until early October. Duration of grazing by pasture would vary from as little as four days to as long as 83 days but the average duration would be approximately 32 days. By late April or late May soils should be moist but not wet unless there were a heavy precipitation event. Potential impacts to saturated soils would be less than under the Proposed Action. The extended use period of this alternative would result in more trailing as livestock travel between forage areas and water sources. Livestock use in all pastures would alternate and would occur either in the middle of the growing period, late in, or slightly after the growing period. Utilization of forage would be higher (than the Proposed Action) because there would be 12 percent more AUMs scheduled on average. Depending on precipitation received vegetation would have some opportunity to regrow after being grazed to produce litter to protect the soil surface.

Cumulative Effects: Past and present land uses such as oil and gas development and livestock grazing are expected to continue to occur in the future. These uses will include surface disturbance ranging from complete removal of soils for construction and development of oil and gas pads and infrastructure to varying levels of soil disturbance associated with livestock trailing and trampling. Potential impacts associated with oil and gas development should be addressed with project specific BMPs. Livestock grazing as currently permitted occurs when soils are drier and less susceptible to the impacts of hoof action. On years with average precipitation, some regrowth after the grazing period should occur to provide litter for soil surface protection. On drier years when water is limited livestock use, trailing, and trampling would be heavier in those areas at and nearby available water. Aside from potentially more trailing associated with the longer use period and travel to and from water sources, there should be minimal if any cumulative effects to soil resources under this alternative.

Environmental Consequences of No Livestock Grazing (Alternative C):

Direct and Indirect Effects: Refer to CO-110-2007-30-EA, page 57 for a more detailed analysis of the alternative summarized here. With no livestock grazing, there would be no direct livestock related impacts to soils. Indirectly soils would benefit from reduced disturbance associated with hoof action in wet soils, reduced trailing and increased litter accumulation.

Cumulative Effects: Past and present oil and gas development is expected to continue to some degree in the future. This use will include surface disturbance including complete removal of soils for construction and development of oil and gas pads and infrastructure in localized sites. Without livestock grazing there would be no impacts associated with trailing and trampling. Consumption of forage resources would be limited to slight utilization by deer and elk resulting in more litter accumulation to protect soil surfaces, to improve infiltration, and to provide organic content to the soils.

Mitigation: As part of allotment monitoring, assess impacts to soils related to early season use and adjust livestock use if substantial negative impacts occur.

Finding on the Public Land Health Standard #1 for Upland Soils: Refer to CO-110-2007-30-EA for more detailed discussion. The objectives of this standard are for the maintenance of soil resources and its associated ecological processes. Indicators for meeting this standard include: minimal expression of rills, soil pedestals, and active gully erosion; vigorous, diverse, desirable plant communities, appropriate canopy and ground cover and adequate litter accumulation to minimize overland flow; and upland swales are more densely vegetated than adjacent uplands. In the short term the Proposed Action is expected to allow continued progress toward meeting this standard though it will be important to monitor the effects of the early season use. Primarily this modified grazing use should allow for continued improvements in the plant communities, in-turn benefitting soils though litter accumulation and improved soil surface protection. The Continuation of Current Management alternative should also allow for continued improvements though the extended use period may also extend the process. The No Action alternative relative to the other alternatives would be expected to achieve the same results though in a shorter time frame. Regardless of the alternative, those areas that have been identified as not meeting standards will likely only improve slowly over the long-term.

SURFACE & GROUND WATER QUALITY

Affected Environment: Surface water quality classifications have changed slightly since the 2007 EA, CO-110-2007-030. Stream segment 9a is no longer use protected, but has similar identified beneficial uses. Stream segments 7 and 13a are identical to current standards effective January 1, 2012 (CDPHE-WQCC, 2012). None of these segments are listed on the 303d list for list of impaired waters or the monitoring and evaluation list for air quality concerns effective April 30, 2010 (CDPHE-WQCC, 2010). Most of the surface water features in the allotment are ephemeral systems flowing only in response to stormwater from spring snow melt or rain storms. As described in CO-110-2007-030, many of these systems are incised with gullies and terraces in most of the valley bottoms. According to the vegetation section some portions of this allotment have altered structural/functional plant communities with the plant community understory dominated by invasive, non-native plant species (e.g., cheatgrass) and some noxious weeds.

Groundwater features in the allotment include at least eight springs located in the headwaters of tributaries to Blacks Gulch, Table 10. Based on the high values for specific conductivity, particularly for Kellog #1 these springs are likely derived from bedrock aquifers. The most prolific spring is along the east fork of Scenery Gulch (Blacks Gulch Spring) and on the western

fork (Hillside Spring). There are three in-channel reservoirs that have been built on private lands in Scenery Gulch and other smaller ponds in Tschuddi Gulch and other areas in the allotment. Most of these are also on private lands. These ponds probably take advantage of in-puts of groundwater into the system and certainly store stormwater, therefore may be less reliable later in the grazing season.

Table 10. Inventoried Perennial Springs Located on BLM Administered Land within Blacks Gulch Allotment #06612

Number	Name	Legal Location	Water Right	Inventory Year	Discharge (gpm)	SC*
122-08	Adobe Spring	2N 96W Sec. 16	yes	2005	0.01	2,700
123-12	Hillside Spring	3N 96W Sec. 25	yes	1983	2.08	1,628
123-14	Blacks Gulch	2N 96W Sec. 06	yes	1983	40.00	3,340
145-05	Kellog #1	1N 96W Sec. 03	yes	1983	0.04	11,261
145-06	Kellog #2	1N 96W Sec. 03	yes	1983	0.50	8,177
145-07	Rattlesnake	1N 96W Sec. 04	no	1984	0.11	2,227
145-08	Coyote Spring	1N 96W Sec. 04	no	1984	0.03	3,144
145-99	Powder Spring	1N 96W Sec. 04	no	1999	0.75	6,000

*SC is specific conductivity ($\mu\text{S}/\text{cm}$) and measures the ability of water to conduct electricity across a known distance and typically has a linear relationship to dissolved solids.

Environmental Consequences of the Proposed Action (Alternative A):

Direct and Indirect Effects: The Proposed Action will change the timing and duration of grazing. This allotment consists of six pastures. The Blacks Gulch and the Middle pastures are the most likely to see impacts due to their proximity to the White River, the presence of saline soils, and active erosion in the gullies. Water quality impacts from grazing tend to be greatest during the spring when conditions are muddy leading to more erosion and when plants are more susceptible to impacts from grazing. However, early spring would also have colder temperatures and result in less muddy conditions. Soils in the upper pastures (Oil Well Gulch, Tschuddi Gulch, and Scenery Gulch) would be less prone to impacts from hoof action since the soils here are more stable and these pastures would be grazed later in the spring. Water availability should be good in each of these pastures, especially with the ponds available on private lands.

Grazing removes vegetation that may help reduce rain splash erosion, lessen surface runoff and livestock often preferentially remove grass and forb species that form root masses that hold together soil matrices better than non-desirable species. Hoof action from trailing to and from water, nutrient and forage sources as well as travel through pastures create preferential flow paths that can concentrate overland flow and intercept subsurface flows. Vegetation loss and trailing would be expected to contribute to potential increases in sediment production from exposed soils, gully initiation and channel erosion in some locations.

Seven livestock concentration areas on BLM administered lands in the Blacks Gulch Allotment were identified mostly around water sources (see the Cultural Resources section). Impacts from cattle use around water sources and concentration areas include compaction and direct impacts to vegetation from grazing. Springs can experience water quality impacts from cattle hoof action near the source and grazing of wetland plants typical of springs. In some cases trampling by cattle can cause springs to cease production or result in more surface water that can be subject to

evaporation. Range improvements can protect the integrity of springs and maintain water quality downstream from springs. A typical range improvement project will include fencing off the vegetation and the water source associated with the spring, installation of a spring box or infiltration chamber that collects water below the surface and feeds a pipeline that is run to a trough outside the fenced area. Any proposed range improvement for these springs would go through environmental analysis before being implemented.

The Soils section in CO-110-07-030-EA described many areas with alkaline and saline soils corresponding to outcrops of geologic features that naturally occur throughout the allotment. Once these soils are disturbed (i.e., from hoof action or removal of perennial vegetation during grazing), the potential for the release of sediment and salt is increased. All of the soils within the allotment have the potential to create water quality-related sediment and/or salinity problems when disturbed, but this is especially true along the drainage bottoms. Salts from these eroded soils are likely to move with surface waters during storm events. The majority of these saline soils are along the drainage bottoms of Blacks Gulch, Tschuddi Gulch and Scenery Gulch. Therefore, if mobilized these salts would enter the White River via Blacks Gulch.

The BLM-WRFO manages grazing on public lands according to the 1997 White River ROD/RMP. It outlines the Standards for Public Land Health and the Colorado Livestock Grazing Management Guidelines. They include management guidelines for upland soils, riparian systems, healthy desirable plant communities, and water quality (both surface and ground). The 1997 White River ROD/RMP also establishes minimum rest requirements during the plant growing season for grazing allotments to restore plant vigor, improve watershed conditions, and improve rangeland conditions (See the Vegetation Section). Neither the Proposed Action alternative nor the Continuation of Current Management alternative completely meet the rest requirements. All pastures except the Blacks Gulch pasture will have variations in timing of grazing use between even and odd years that should benefit vegetation and soil recovery.

With good grazing management and the mitigation listed below, the impacts from the proposed grazing schedule are not expected to be beyond those typically experienced on public lands. Future assessments for observed erosion could indicate the need for range improvements and additional changes in grazing schedules to mitigate impacts, meet objectives and make progress toward meeting the Standards for Public Land Health.

Cumulative Effects: Oil and gas development is expected in about a fifth of the allotment. The southwestern portion of the allotment is in what is called the Mesaverde Gas Play Area where oil and gas development is expected. The Oil Well, Homestead, Wray Gulch, Middle and Black Gulch Pastures contain portions of the Mesaverde Gas Play. It is estimated that well pads are likely to occur at about a 2-3 well pads per square mile. There are also current oil and gas wells in the area including exploration wells at about a 1-2 well pad per square mile density and a facility located on private lands that treats and stores wastes from oil and gas development (left-over drilling fluids and produce water). Oil and gas development typically includes surface disturbance for well pads, pipelines, roads and support facilities. Dispersed recreation also occurs on public lands including off-highway vehicle use, hunting and other activities. Impacts other than oil and gas development, dispersed recreation and grazing are not expected in the analysis area (Grazing allotment boundary). In general, the Proposed Action and other activities would

increase sediment and salt loading to the White River but are not likely to exceed State standards for water quality.

Environmental Consequences of Continuation of Current Management (Alternative B):

Direct and Indirect Effects: This alternative would continue the current grazing. In general current management starts grazing in the allotment later, has a longer duration of grazing in the allotment and less regrowth/recovery opportunity for native plants. Impacts would be similar in nature to those described for the Proposed Action but are likely to be greater, assuming there would be more impacts to native vegetation from grazing. Impacts from hoof action and trampling may be less since grazing would be started later than under Alternative A. However, with mitigation attached under both alternatives local issues with erosion due to trailing should be addressed under each alternative with range improvements or changes in grazing management and thus these alternatives should not result in noticeably different impacts.

Cumulative Effects: Cumulative impacts would be similar in nature to those described for the Proposed Action with a decrease in potential erosion in the spring due to the later turn-on date but more impacts to vegetation due to a longer duration of grazing.

Environmental Consequences of No Livestock Grazing (Alternative C):

Direct and Indirect Effects: No impacts to vegetation or localized erosion from concentrated grazing use, access to water, or trailing would occur from livestock under this alternative. Therefore this alternative would have the least potential for impacting surface or groundwater resources.

Cumulative Effects: Cumulative impacts would be similar in nature to those described for the Proposed Action with no impacts from livestock grazing.

Mitigation: The following should be added as conditions of approval:

1. BLM Responsibility: The springs identified in Table 10 should be inventoried by the Soil/Water/Air program of the BLM. If resource damage is occurring, pursue in coordination with operator to develop and implement necessary range improvement projects.
2. Stocking rates should be reduced during periods of drought and/or during periods of drought recovery to improve upland health.
3. Immediate action should be taken to reduce trailing issues when they are observed. If accelerated erosion (rilling, gullying etc.) is occurring due to trailing please contact the authorized officer to determine if a change in management or a rangeland development project should be constructed the grazing approach altered to reduce impacts.

Finding on the Public Land Health Standard #5 for Water Quality: There are currently no water bodies listed on Colorado's section 303(d) of the Clean Water Act in the grazing allotment or directly downstream. None of the alternatives are likely to cause the exceedance of the Colorado water quality standards.

WETLANDS AND RIPARIAN ZONES

Affected Environment: Refer to CO-110-2007-30-EA, page 40 for a more detailed description of the following summary. The 14+ miles of drainages on public lands within the Blacks Gulch allotment support variable riparian zones. Riparian areas with perennial surface flow occur almost entirely on private lands. On public lands drainages are degraded and generally ephemeral with minimal water holding capacity and no perennial water availability. These areas currently support low diversity and moderate levels of riparian vegetation. Where present, riparian vegetation is mostly Baltic rush (*Juncus balticus*) and inland salt grass (*Distichlis spicata*). There are few areas on public lands with sedges, willows or other riparian obligate species. Assessments conducted in 2006 rated most riparian areas throughout the allotment as non-functional. Concerns noted included the lack of vegetative cover to protect banks, scoured channels associated with high velocity flows, degraded terrace benches, and uplands devoid of perennial grasses. Livestock impacts in the riparian zone were not listed as a current factor contributing to non-functional systems. Noxious weeds were noted in most of the drainages. The lack of adequate perennial herbaceous cover throughout the uplands and the lack of litter accumulation throughout the uplands were stated as the primary causes of increased overland flows and high velocity flash flood events. Degraded uplands as described above resulting from historic and recent livestock use was the main factor resulting in negative impacts to the functional condition of drainages and riparian communities. All channels have potential to improve to a higher functional status with improved riparian association.

Environmental Consequences of the Proposed Action (Alternative A):

Direct and Indirect Effects: The proposed grazing schedules would result in short duration (average of 16 days) grazing use in each pasture of the allotment though grazing would be at a fairly high intensity. The March 15 to April 1 use period in the Blacks Gulch pasture and the April 2 to April 19 and April 20 to May 7 use period (alternate years) in the Middle pasture would allow livestock access to the Blacks Gulch channel and the lower portions of Scenery Gulch and Tschuddi Gulch channels. Livestock related disturbance in these channels would be early in the growing season and during the spring run-off period. All of these channels are ephemeral but would be expected to have surface flow during the early use periods. Soft wet soils would increase the impacts of livestock hoof action and could increase sediment loads entering these channels. Two of the upper pastures (Tschuddi and Scenery) have perennial flow so regardless of the timing of use, the short duration of grazing in these areas would lessen the overall impacts to the riparian areas. There are no channels in the Homestead, Wray or Oil Well Gulch pastures that support riparian vegetation. Throughout the allotment, ponds would likely be full or at least have adequate water for livestock needs. The disbursed availability of water would allow cattle to make use of areas that would be less accessible due to lack water if grazed later. Increased distribution would reduce impacts associated with livestock trailing to and from, or concentrated trampling around, limited water sources.

Cumulative Effects: Continued oil and gas development is not expected to have negative effects on riparian resources. Presently it is unclear whether the potential impacts to soils resulting from livestock use during wet soil conditions will balance with the benefits of short duration of use and re-growth opportunity. In the long term, improved livestock management

practices should result in improved conditions in the uplands that will translate to gradual improvements in the channels and riparian areas of the allotment.

Environmental Consequences of Continuation of Current Management (Alternative B):

Direct and Indirect Effects: Refer to CO-110-2007-30-EA page 46 for detailed analysis of this alternative, listed as the Proposed Action alternative in that document. Continuation of current management would result in grazing by pasture ranging from four to 83 days with the average between years being 33 days. Grazing would be at a moderate intensity but the duration of trampling impacts to, from, and at water sources would be protracted. Soils in the uplands would tend to be somewhat dry and less prone to disturbance by hoof action. Grazing in the Blacks Gulch pasture would alternate between April 25 to June 5 (even years) or June 8 to July 1 (odd years) and use in the Middle pasture would alternate from June 6 to July 10 or July 2 to July 20. Use in these pastures would allow livestock access to the Blacks Gulch channel and the lower portions of Scenery Gulch and Tschuddi Gulch channels. Surface flow in the Blacks Gulch and Tschuddi Gulch channels would generally have ceased before the use periods so livestock impacts in these areas would likely be light to moderate. Surface flow in Scenery Gulch can be regulated by a head gate on the private lands above but generally extends only into the upper portion of the Middle pasture through June.

Water availability in many ponds throughout the allotment declines by mid-summer (June). On drier years some pastures or portions thereof, especially the Oil Well Gulch pasture, are not usable due to inadequate or a total lack of dependable water. Water would be less or not available in some parts of the allotment so livestock use would be more concentrated closer to the remaining water sources. Perennial water sources available in the Tschuddi Gulch and Scenery Gulch pastures (mostly on private land) would experience heavy trailing and trampling. Past use has shown utilization of forage to be limited to those areas within reasonable distance of remaining water sources. The ability to utilize the entire allotment with the later, longer grazing schedules of this alternative will be variable depending on water availability year to year.

Cumulative Effects: Continued oil and gas development is not expected to have negative effects on riparian resources. With proper livestock management, which could include shortened use period in some pastures due to lack of water, the later, longer grazing schedules of this alternative should not have negative impacts to riparian resources. With improved livestock management, conditions throughout the uplands should improve translating to gradual improvements in the channels and riparian areas of the allotment.

Environmental Consequences of No Livestock Grazing (Alternative C):

Direct and Indirect Effects: Refer to CO-110-2007-30-EA, page 49 for a more detailed analysis of the alternative summarized here. Currently direct impacts to riparian systems by livestock are negligible but would be eliminated under the no grazing alternative. More importantly, without livestock grazing, upland plant communities and to a lesser extent riparian vegetation would experience increased ground cover and litter accumulation to trap sediments and slow overland flows. The volume and intensity of flashy flows that currently scour channels would be reduced allowing incremental improvements in channel morphology and function.

Cumulative Effects: Past and present land uses including oil and gas development would continue and have minimal effect on the drainages and riparian areas throughout this allotment.

No grazing by livestock would result in incremental improvements in channel condition and function as a result of improved conditions in the uplands. Without livestock grazing the increase in perennial grass cover and litter accumulation would slow overland flows associated with storm events. The volume and velocity of flows would reduce, allowing channels to stabilize and progress toward their potential more rapidly than under the other alternatives.

Mitigation: Same as described in Soils section.

Finding on the Public Land Health Standard #2 for Riparian Systems: Refer to CO-110-2007-30-EA, page 50 for more detailed discussion. The objectives of this standard are for riparian systems associated with both running and standing water to function properly where vegetation captures sediment, stabilizes soils, and provides forage, habitat and biological diversity; water is stored and released slowly; water quality is improved or maintained; and systems are able to recover from disturbance events. Indicators for meeting this standard include: presence of appropriate, adequate, diverse, and vigorous vegetation; stable banks and soils with sufficient moisture; and floodplains and channels with appropriate morphology. When last rated in 2006, most of the riparian areas in the Blacks Gulch allotment were functioning below their potential and were not meeting this standard. In the short term the Proposed Action should result in improvements in the uplands that will translate in the longer term to improvements in the channels and associated riparian systems throughout the allotment. As with soils, it will be important to monitor the effects of the early season use, especially in the lower pastures. The Continuation of Current Management alternative should also allow for continued improvements though the extended use period may also extend the process. The No Action alternative relative to the other alternatives would be expected to achieve the same results though in a shorter time frame.

VEGETATION

Affected Environment: Refer to CO-110-2007-30-EA, page 59 for a more detailed description of the following summary. Dominant ecological sites on BLM lands within the Blacks Gulch allotment are Pinyon-Juniper (PJ) woodlands, Mountain Browse (7,862 acres), Stoney Foothills (4,282 acres), and Rolling Loam (2,834 acres). In this allotment, 89 percent (21,905 BLM acres) of the ecological sites represent plant communities within acceptable thresholds for healthy communities and within acceptable ranges for desired plant communities (mid seral to PNC) as defined in the White River ROD/RMP (page 2-11). Vegetative production and species composition on these sites provide adequate cover for soil protection and forage production to meet ecological and livestock demands. The remaining 11 percent (2,841 BLM acres) of the public lands have ecological sites that have been rated as early seral and not meeting Colorado Public Land Health Standards. This rating was made primarily because of a lack of appreciable perennial plant cover and excessive erosion rates. These sites generally have altered structural/functional plant communities with the plant community understory dominated by invasive, non-native plant species (e.g., cheatgrass) and to a lesser extent noxious weeds that are highly competitive with native vegetation.

Cheatgrass is a winter annual grass that typically germinates in the fall, remains dormant through the winter, and then grows rapidly and sets seed in the spring utilizing available soil moisture before the on-set of growth of the native perennial grasses. Compared to native perennial grasses, cheatgrass has limited resource or forage value. Cheatgrass has a small shallow root system that does not function well to stabilize soils. The amount of cheatgrass forage production is highly variable each year depending on spring time moisture. For a brief period in the spring when cheatgrass is green and actively growing it is palatable and nutritious. When the plant begins to mature it produces numerous seeds with sharp awns that cure quickly making it unpalatable. Because of its aggressive growth and profuse seed production it is highly competitive with native plants, especially where desirable native plants are stressed, lack vigor, and are unable to compete effectively.

The early seral sites are typically located in the Alkaline Slopes and Rolling Loam range sites found in valley bottoms, valley toe-slopes, benches, and/or areas of gentle terrain. Cheatgrass and other non-native annual forbs such as bur buttercup, redstem filaree (storksbill), cheatgrass, and flixweed dominate the understory in portions of the Blacks Gulch and Middle pastures. These weedy annuals are present to a lesser extent throughout portions of the other pastures as well. The early seral areas have been degraded from drought and historical and recent influences of livestock grazing.

The 2006 Land Health Assessments showed that the early seral basin and Wyoming big sagebrush (*Artemisia tridentata* ssp.) and greasewood (*Sarcobatus vermiculatus*) plant communities typically had understories where cheatgrass accounted for 25 to 45 percent of the species composition. Native perennial grasses including western wheatgrass (*Agropyron smithii*), bottlebrush squirrel tail (*Sitanion hystrix*), Indian ricegrass (*Oryzopsis hymenoides*), June grass (*Koeleria cristata*), Sandberg bluegrass (*Poa secunda*), and needle-and-thread grass (*Stipa comata*) are still present in most of these areas but at much lower levels than would be seen in a healthy native plant community. Favorable growing season precipitation in 2011 combined with reduced use allowed forage plants an improved opportunity to meet physiological needs and produce seed.

The following table provides a breakdown by pasture of BLM administered rangelands not meeting the Standards for Public Land Health. The lower elevation pastures (Blacks Gulch, Middle, Homestead, and Wray Gulch) have the greatest amount of rangelands not meeting Public Land Health Standards (2,368 BLM acres).

Table 11. Acres not meeting Standards for Public Land Health, 2006 Assessment

Blacks Gulch Allotment:			
Rangelands Not Meeting the Standards for Public Land Health 2006 Assessment			
Pasture	BLM Acres Not Meeting	Total BLM Acres within Pasture	% of Acres not Meeting Standards
Blacks Gulch	1090	4957	22%
Middle	1177	6674	18%
Homestead	78	143	55%
Wray Gulch	23	996	2%
Oil Well Gulch	77	3839	2%
Tschuddi	165	3689	4%

Blacks Gulch Allotment:			
Rangelands Not Meeting the Standards for Public Land Health 2006 Assessment			
Pasture	BLM Acres Not Meeting	Total BLM Acres within Pasture	% of Acres not Meeting Standards
Scenery Gulch	231	4448	5%
Total:	2841	24746	11%

The growing season varies to some extent each year depending on variations in temperature and precipitation. For the lower pastures of the Blacks Gulch allotment (Blacks Gulch, Middle, Homestead, and Wray Gulch) the average growing season is from about April 1 to June 10 and in the upper elevation pastures (Scenery Gulch, Tschuddi Gulch, and Oil Well Gulch) it occurs from about May 1 to July 20.

The 1997 White River ROD/RMP establishes minimum rest requirements during the plant growing season for grazing allotments. The objectives of this period of deferment from grazing are to restore plant vigor, improve watershed conditions, and improve rangeland conditions (page 2-23). Early season grazing has the potential to impede the system's ability to rebound and can reduce overall forage production. For the lower pastures of the Blacks Gulch allotment the rest period one out of every three years is from March 15 through June 10 and for the upper pastures and April 15 through July 10 (page D-29). Neither the Proposed Action alternative nor the Continuation of Current Management alternative completely meet the rest requirements. The grazing schedules of these alternatives attempt to meet the objectives of the rest requirements to allow for improvements in rangeland health while also meeting the management objectives of the livestock operator. As with any grazing permit, grazing schedules are dynamic and are subject to adjustment through time based on range trend and condition. Future assessments could indicate the need for additional changes in grazing schedules to meet these objectives and make progress toward meeting the Standards for Public Land Health.

Long term vegetation trend monitoring completed in 2005 indicated declining trend in desirable native perennial forage species at most monitoring sites. Below average precipitation during the growing season was the norm from 2000 through 2010. Generally throughout that timeframe adjustments in stocking rates or reductions in season of use to relieve pressure on forage species were minimal. Utilization of forage plants throughout the growing season was heavy. Uplands were devoid of litter to protect soils and slow erosion and there was minimal if any regrowth opportunity.

The Standards for Colorado Public Land Health were evaluated for the Blacks Gulch allotment in 2006. The declining trend was attributable to a combination of drought and inappropriate livestock management practices. Livestock grazing management practices in place at that time were determined to be a factor in plant communities not meeting Standard 3 for Plant and Animal Communities. Contributing factors also included historic and recent livestock grazing during the critical growing season on a yearly basis, heavy utilization, reduced litter accumulation, and inadequate plant recovery and re-growth opportunities.

The Grazing Response Index (GRI) assessment methodology is a monitoring tool used to assess the effects of grazing on forage species. The GRI methodology was developed by Dr. Roy Roath,

Colorado State University Cooperative Extension Range Specialist in 1999. It has been adopted and utilized by landowners and land management agencies as an effective range monitoring tool. Much of the GRI information summarized below was taken from: *Reed, F., R. Roath, and D. Bradford. 1999. The Grazing Response Index: A Simple and Effective Method to Evaluate Grazing Impacts. Rangelands 21(4): pages 3-6.*

GRI assessments give scores to certain aspects of the current year's grazing use. The standard GRI methodology considers three key concepts related to plant health: frequency and intensity of defoliation of forage plants, and their opportunity for regrowth after the grazing period. Frequency looks at to the number of times a plant is defoliated during the grazing period and is related to the duration of the grazing period. Intensity of grazing is a description of the amount of photosynthetically active leaf material removed and is related to stocking rate. Opportunity is the amount of time plants have to grow prior to grazing or to regrow after the grazing period. The three measures are additive to provide a score of the effects to plant community health, structure, and vigor as a result of that year's grazing. A positive numerical value indicates beneficial management. A negative score indicates that the management may be harmful and a zero score indicates likely neutral effects. GRI tables with estimated scores below (starting on page 27) are in the Environmental Consequences section for each alternative. Annual scores would vary somewhat based on actual intensity of grazing and variations in growing conditions and regrowth opportunity. The average amount of the rest periods met by the grazing alternatives (from the 1997 WRFO RMP/ROD) is presented below as the Growth Opportunity row. Additional factors associated with the grazing alternatives are also presented. Table 12 is based on an average 70 day growing season and provides a basic general comparison of the three grazing alternatives.

Table 12. GRI Comparison table

GRI Measure	Proposed Action	Continuation of Current Management	No Grazing
Frequency of defoliation (duration of grazing)	16 days average	32 days average	0
Intensity of grazing	600 head	425 head	0
Opportunity for regrowth	49 days average	3 days average	Full
Additional comparative factors:			
Growth opportunity	9 days average	54 days average	Full
Timing of grazing	Early growing season	Late/after growing season	n/a
Overall use	1,834 average total AUMs	2,078 average total AUMs	0
Soil conditions	Frozen/wet/muddy	Generally dry	n/a

Environmental Consequences of the Proposed Action (Alternative A):

Direct and Indirect Effects: Table 13 below outlines the scheduled use periods, days of growth opportunity before grazing and days of regrowth/recovery opportunity after grazing for both the even and odd years of the Proposed Action Alternative. There are two potential disadvantages of the proposed grazing plan. One possible disadvantage would be some potential for hoof action impacts to soils and vegetation especially in the Blacks Gulch pasture, Middle pasture, and Homestead portion of the Homestead/Wray pasture. The other potential disadvantage to this plan would be grazing of forage plants early in the spring when the energy for growth must come

from carbohydrates stored in the roots and crown of the plant. Advantages of the proposed grazing schedules are that forage plants would encounter fewer defoliation events and they would have an average of more than half of the growing season for regrowth and recovery opportunity after livestock leave each pasture. Additionally dormant season use yearly in the Blacks Gulch pasture and every other year in the Oil Well Gulch pasture would minimize impacts to forage plants. For all other pastures it is not clear at this time if the scheduled recovery time will be adequate to allow forage plants complete recovery from early season grazing to maintain their vigor and prevent reduced forage production.

Table 13. Proposed Action Growth and Regrowth Opportunity

Pasture	Even Year Scheduled Use Period	Days of growth opportunity before grazing	Days of regrowth opportunity after grazing	Odd Year Scheduled Use Period	Days of growth opportunity before grazing	Days of regrowth opportunity after grazing	Difference between years
Blacks Gl.	3/15-4/1	dormant	70	3/15-4/1	dormant	70	none
Middle	4/2-4/19	1	51	4/20-5/7	19	33	18 days
Homestead / Wray Gl.	4/20-4/26	19	44	4/2-4/8	1	62	18 days
Oil Well Gl.	4/27-5/7	4	55	4/9-4/19	dormant	70	18 days
Tschuddi Gl.	5/8-5/25	7	45	5/26-6/15	24	25	18 days
Scenery Gl.	5/26-6/15	24	25	5/8-5/25	7	45	18 days

Under this alternative livestock would enter the allotment early in the spring when native forage species are still dormant. Grazing use in the Blacks Gulch pasture would rely entirely on previous years standing forage production. Depending on spring time temperatures, cheatgrass may also be actively growing and palatable. When soils thaw during the day they would generally be saturated and soft making the root systems of perennial grasses more susceptible to damage from hoof action. The degree of this impact is currently unknown but would be variable depending on soil conditions. After livestock leave this pasture, native forage plants would have the entire growing season for growth. Because of the dormant season use a GRI score for this pasture would be positive for all three measures (see table below). If recovery of soil resources during the non-grazed period is adequate this grazing plan should be favorable to vegetation. If not, adjustments in the use period would be required.

Table 14. Proposed Action GRI Estimation Blacks Gulch Pasture

Blacks Gulch pasture (every year) 3/15 – 4/1		General score (<i>estimated</i>)
Frequency (duration)	18 days	n/a (dormant season use)
Intensity (stocking rate)	High	n/a (dormant season use)
Opportunity (growth/regrowth /recovery)	Full growing season	+2
Total:		+2

As livestock leave the Blacks Gulch pasture they would be moved into the Middle pasture (even years) or the Homestead/Wray pasture (odd years) where grazing use would be at the beginning of the growth period for native plants. Cheatgrass would be actively growing and palatable. Cattle would likely select green, actively growing plants but would also utilize previous years forage production to some extent. The small Homestead pasture would be used in conjunction

with the adjacent Wray Gulch pasture for a seven day period allowing growing season opportunity for forage plants to grow prior (even years) and/or regrow after (odd years) being grazed. In the Middle pasture growth (odd years) and regrowth (even years) opportunities would be similar though the grazing period would be longer (totaling 18 days).

On even years the potential impacts to soils and roots of forage plants in the Middle pasture would be similar to those of the Blacks Gulch pasture. Impacts to soils especially in the Homestead portion of the Homestead/Wray pasture on odd years would be similar but brief duration. Duration of grazing in the Homestead/Wray pasture would be very brief, reducing the frequency (re-grazing) of forage plants being grazed. Grazing would occur when cheatgrass is most available and palatable providing a short duration, though variable forage source. In relation to GRI assessments, every other year forage plants would have either optimal regrowth opportunity or a combination of both growth and regrowth opportunity in these pastures and grazing effects on forage resources should be neutral or beneficial (see tables below).

Table 15. Proposed Action GRI Estimation Middle Pasture

Middle pasture (even year) 4/2 – 4/19		General score (<i>estimated</i>)
Frequency (duration)	18 days	0
Intensity (stocking rate)	High	-1 (<i>estimated</i>)
Opportunity (growth/regrowth /recovery)	Most of season	+1
Total:		0 (neutral effect)
Middle pasture (odd year) 4/20 – 5/7		
Frequency (duration)	18 days	0
Intensity (stocking rate)	High	-1 (<i>estimated</i>)
Opportunity (growth/regrowth /recovery)	Most of season	+1
Total:		0 (neutral effect)

Table 16. Proposed Action GRI Estimation Homestead/Wray Pasture

Homestead/Wray Gl. pasture (even year) 4/20 -4/26		General score (<i>estimated</i>)
Frequency (duration)	7 days	+1
Intensity (stocking rate)	High	-1 (<i>estimated</i>)
Opportunity (growth/regrowth recovery)	Most of season	+1
Total:		+1 (beneficial)
Homestead/Wray Gl. pasture (odd year) 4/2 – 4/8		
Frequency (duration)	7 days	+1
Intensity (stocking rate)	High	-1 (<i>estimated</i>)
Opportunity (growth/regrowth /recovery)	Most of season	+1
Total:		+1 (beneficial)

Grazing use in the Oil Well Gulch pasture would be for an eleven day period. During the odd year grazing schedule livestock use in the Oil well pasture would be during the dormant period for native forage species. Cattle would rely almost entirely on the previous year's forage production. Even year grazing use would be early in the growth period and would allow the majority of the growing season for regrowth and recovery after cattle are removed. In general soils in this pasture would be less prone to impacts from hoof action. This pasture has the most

variable water availability but in April and early May ponds throughout the pasture are more likely to have water available allowing for optimal livestock distribution. In relation to GRI assessments, every year forage plants would have optimal growth and regrowth opportunity. Grazing effects on forage resources should be beneficial (see tables below).

Table 17. Proposed Action GRI Estimation Oil Well Gulch Pasture

Oil Well Gulch pasture (even year) 4/27 – 5/7		General score (<i>estimated</i>)
Frequency (duration)	11 days	+1
Intensity (stocking rate)	High	-1 (<i>estimated</i>)
Opportunity (growth/regrowth /recovery)	Most of season	+2
Total:		+2 (beneficial)
Oil Well Gulch pasture (odd year) 4/9 – 4/19		
Frequency (duration)	11 days	n/a (dormant season use)
Intensity (stocking rate)	High	n/a (dormant season use)
Opportunity (growth/regrowth /recovery)	Full growing season	+2
Total:		+2 (beneficial)

Cattle would leave the Oil Well Gulch pasture (even years) or the Middle pasture (odd years) and enter either the Tschuddi Gulch pasture or the Scenery Gulch pasture respectively. On alternate years grazing would be for 18 days early in the growth period or for 21 days in the middle of the growth period. When grazing use is early in the growing season forage plants would have more than half of the growing period after grazing for re-growth and recovery. On alternate years when grazing is in the middle of the growth period forage plants would average more than three weeks of growth before being grazed and have more than three weeks of the growing period for re-growth and recovery after being grazed. Soils in these two pastures would be less prone to impacts from hoof action. Water availability should be good in each of these pastures during the May/June scheduled grazing periods allowing for optimal livestock distribution. These two upper pastures have productive somewhat sub-irrigated bottoms (mostly private) where regrowth would likely be more rapid but in the tables below the calculation was done consistent with the other pastures. Based on these estimated scores grazing effects in these pastures would be likely be neutral.

Table 18. Proposed Action GRI Estimation Tschuddi Gulch Pasture

Tschuddi Gulch pasture (even year) 5/8 – 5/25		General score (<i>estimated</i>)
Frequency (duration)	18 days	0
Intensity (stocking rate)	High	-1 (<i>estimated</i>)
Opportunity (growth/regrowth /recovery)	Most of season	+1
Total:		0 (neutral effect)
Tschuddi Gulch pasture (odd year) 5/26 – 6/15		
Frequency (duration)	21 days	-1
Intensity (stocking rate)	Moderate	0 (<i>estimated</i>)
Opportunity (growth/regrowth /recovery)	Most of season	+1
Total:		0 (neutral effect)

Table 19. Proposed Action GRI Estimation Scenery Gulch Pasture

Scenery Gulch pasture (even year) 5/26 – 6/15		General score (<i>estimated</i>)
Frequency (duration)	21 days	-1
Intensity (stocking rate)	Moderate	0 (<i>estimated</i>)
Opportunity (growth/regrowth /recovery)	Most of season	+1
Total:		0 (neutral effect)
Scenery Gulch pasture (odd year) 4/20 – 5/7		
Frequency (duration)	18 days	0
Intensity (stocking rate)	High	-1 (<i>estimated</i>)
Opportunity (growth/regrowth /recovery)	Most of season	+1
Total:		0 (neutral effect)

Cumulative Effects: Past and present land uses such as oil and gas development and livestock grazing are expected to continue to occur in the future. These uses will include surface disturbance ranging from complete removal of vegetation for construction and development of oil and gas pads and infrastructure to varying levels of disturbance associated with livestock trailing and trampling and utilization of forage resources. Potential impacts associated with oil and gas development should be addressed with project specific BMPs. Livestock grazing as proposed would occur either before or early in the growth period for forage plants. Where grazing occurs early in the growth period forage plants would experience some grazing related stress during the relatively brief use periods. In most pastures when livestock are moved to the unit, forage plants would have more than half of the growing season for re-growth and recovery each year. The Middle, Tschuddi Gulch and Scenery Gulch pastures would have this re-growth and recovery opportunity every other year. The degree of impacts to soils over the long term, especially in the lower pastures, associated impacts to vegetation and the amount of recovery of each during the un-grazed period are not clear at this time. Monitoring those impacts for the first few years of implementation of this grazing plan would be helpful to assess and potentially modify this grazing use if needed in the future. Over time the cover and composition of forage plants would be expected to improve with responsive livestock management.

Environmental Consequences of Continuation of Current Management (Alternative B):

Direct and Indirect Effects: Table 20 below outlines the scheduled use periods, days of growth opportunity before grazing and days of regrowth/recovery opportunity after grazing for both the even and odd years of the Continuation of Current Management alternative. While this schedule does not fully meet the rest requirements outlined in the 1997 WRFO ROD/RMP, the main advantage of it is the opportunity for plants to grow prior to being grazed. The main disadvantages of this grazing plan are longer duration grazing, limited to no regrowth/recovery opportunity, and potential for inadequate water in portions of the allotment limiting livestock distribution and available forage.

Table 20. Current Management Even and Odd Year Growth and Regrowth Opportunity

Pasture	Even Year Scheduled Use Period	Days of growth opportunity before grazing	Days of regrowth opportunity after grazing	Odd Year Scheduled Use Period	Days of growth opportunity before grazing	Days of regrowth opportunity after grazing	Difference between years
Blacks Gl.	4/25-6/5	24	4	6/8-7/1	68	0	43
Homestead	5/1-5/18	30	22	5/25-5/28	54	12	24
Wray Gl.	5/19-6/30	47	0	5/29-6/7	58	3	10
Oil Well Gl.	7/11-10/1	70	0	7/21-8/9	70	0	10
Middle	6/6-7/10	66	0	7/2-7/20	70	0	26
Scenery Gl.	7/11-8/22	70	0	9/11-10/10	70	0	60
Tschuddi Gl.	8/23-10/1	70	0	8/10-9/10	70	0	13

Refer to CO-110-2007-30-EA page 67 for detailed analysis of this alternative, listed as the Proposed Action alternative in that document. In general under this alternative livestock rotate through the seven existing pastures. Grazing would occur late in or after the growth period thus allowing forage plants opportunity to grow prior to being grazed. For most pastures the growth period when soils generally still have adequate moisture to support growth would be passed by the time livestock are moved out of the area thus allowing forage plants minimal opportunity for regrowth and recovery prior to going dormant. With the exception of the small Homestead pasture, the duration of grazing in each pasture would range from ten to 83 days with an average between years of 33 days. Forage plants would likely have repeated defoliation events because of the duration of grazing in each pasture.

Under this alternative livestock enter the allotment on varying dates (April 25 on even years and May 25 on odd years). Use in the Blacks Gulch pasture is late in or after the growing season. Forage plants have had from over three weeks to the full growing season for growth prior to being grazed but have minimal if any opportunity after livestock leave for re-growth and recovery. On even years cheatgrass is generally fully grown and beginning to set seed though some is still be palatable as forage during the first few days of the use period. On odd years cheatgrass is cured out and not useful as a forage resource but native perennial forage plants have also grown and set seed. Cattle rely almost entirely on current the year's native forage production. Unless late summer precipitation is received there is minimal opportunity for forage plants to re-grow and recover after livestock leave the pasture. Especially on odd years variable water availability limits to some extent where livestock can graze. Soils are generally dry enough that impacts to soil resources from hoof action are not a concern. The benefit of grazing use as scheduled is allowing forage plants growth opportunity prior to being grazed. The longer duration of grazing and the limited regrowth/recovery opportunity are drawbacks to these schedules. Potential for reduced water availability and the inability to utilize cheatgrass are also possible drawbacks. Estimated GRI assessment scores are shown below.

Table 21. Current Management GRI Estimation Scores Blacks Gulch

Blacks Gulch pasture (even year) 4/25 – 6/5		General score (<i>theoretical</i>)
Frequency (duration)	42 days	-1
Intensity (stocking rate)	Moderate	0
Opportunity (growth/regrowth /recovery)	Most of season (growth)	+1
Total:		0 (neutral effect)
Blacks Gulch pasture (odd year) 6/8 – 7/1		
Frequency (duration)	24 days	-1
Intensity (stocking rate)	Moderate	0
Opportunity (growth/regrowth /recovery)	Most of season (growth)	+1
Total:		0 (neutral effect)

The Homestead and Wray Gulch pastures are grazed as separate units with alternating dates and numbers of livestock. On even years forage plants have an average of half the growing season to grow prior to being grazed and on odd years they have close to two thirds of the this time for growth. The Homestead pasture has some opportunity for regrowth and recovery each year but the Wray Gulch pasture has minimal growing season left after grazing. Cheatgrass is minimally useful as a forage source at this point in the growing season so cattle rely on native forage plants. Water is generally available in most ponds in these pastures during the scheduled use periods. Estimated GRI scores are shown below.

Table 22. Current Management GRI Estimation Scores Homestead and Wray Gulch Pastures Even Year

Homestead pasture (even year) 5/1 – 5/18		General score (<i>estimated</i>)
Frequency (duration)	18 days	0
Intensity (stocking rate)	Moderate	0 (<i>estimated</i>)
Opportunity (growth/regrowth /recovery)	Most of season	+1
Total:		+1 (beneficial)
Wray Gl. pasture (even year)		
Frequency (duration)	43 days	-1
Intensity (stocking rate)	Moderate	0 (<i>estimated</i>)
Opportunity (growth/regrowth/recovery)	Most of season (growth)	+1
Total:		0 (neutral effect)

Table 23. Current Management GRI Estimation Scores Homestead and Wray Gulch Pastures Odd Year

Homestead pasture (odd year)		General score (<i>estimated</i>)
Frequency (duration)	4 days	+1
Intensity (stocking rate)	High	-1 (<i>estimated</i>)
Opportunity (growth/regrowth /recovery)	Most of season (growth)	+1
Total:		+1 (beneficial)
Wray Gl. pasture (odd year)		
Frequency (duration)	10	+1
Intensity (stocking rate)	High	-1 (<i>estimated</i>)
Opportunity (growth/regrowth/recovery)	Most of season (growth)	+1
Total:		+1 (beneficial)

Livestock enter the Oil Well Gulch pasture after the growing season. The scheduled use period alternates between 82 days (even years) and 20 days (odd years). Cattle rely almost entirely on the current year's forage production and there is limited (odd year) and no (even year) opportunity for regrowth after livestock leave. This pasture has the most variable water availability and during this scheduled use period livestock have run out of water in the past requiring that they be moved early. Limited water sources sometimes results in concentrated use around any available water with large portions of the pasture getting little if any use. Estimated GRI scores are shown below.

Table 24. Current Management GRI Estimation Scores Oil Well Gulch Pasture

Oil Well Gulch pasture (even year) 7/11 – 10/1		General score (<i>estimated</i>)
Frequency (duration)	83 days	-1
Intensity (stocking rate)	Moderate	0 (<i>estimated</i>)
Opportunity (growth/regrowth /recovery)	Full season (growth)	+2
Total:		+1 (beneficial)
Oil Well Gulch pasture (odd year) 7/21 – 8/9		
Frequency (duration)	20 days	0
Intensity (stocking rate)	High	-1 (<i>estimated</i>)
Opportunity (growth/regrowth /recovery)	Full season (growth)	+2
Total:		+1 (beneficial)

Livestock grazing in both the Tschuddi Gulch and Scenery Gulch pastures is for consistently longer periods but use is after the growth period so forage plants have full opportunity for growth prior to being grazed. There is minimal opportunity for regrowth after the grazing period. Soils in these two pastures would be less prone to impacts from hoof action but livestock have four to five weeks in each pasture where trailing to and from water sources and loafing around them results in concentrated use in these areas. Water availability is generally good in the lower ends of these pastures but late in the season, some water sources up higher have generally dried or are not reliable resulting in more concentrated use closer to water. These two pastures have productive somewhat sub-irrigated bottoms (mostly private land) where regrowth would likely be more rapid though late in the season some of the Tschuddi bottoms have dried out and forage production has slowed. Calculations in the tables below are consistent with calculations for all other pastures.

Table 25. Current Management GRI Estimation Scores Tschuddi Gulch Pasture

Tschuddi Gulch pasture (even year) 8/23 – 10/1		General score (<i>estimated</i>)
Frequency (duration)	40 days	-1
Intensity (stocking rate)	Moderate	0 (<i>estimated</i>)
Opportunity (growth/regrowth /recovery)	Full season (growth)	+2
Total:		+1 (beneficial)
Tschuddi Gulch pasture (odd year) 8/10 – 9/10		
Frequency (duration)	32 days	-1
Intensity (stocking rate)	High	-1 (<i>estimated</i>)
Opportunity (growth/regrowth /recovery)	Full season (growth)	+2
Total:		0 (neutral effect)

Table 26. Current Management GRI Estimation Scores Scenery Gulch Pasture

Scenery Gulch pasture (even year) 7/11 – 8/22		General score (<i>estimated</i>)
Frequency (duration)	43 days	-1
Intensity (stocking rate)	Moderate	0 (<i>estimated</i>)
Opportunity (growth/regrowth /recovery)	Full season (growth)	+2
Total:		+1 (beneficial)
Scenery Gulch pasture (odd year) 9/11 – 10/10		
Frequency (duration)	30 days	-1
Intensity (stocking rate)	High	-1 (<i>estimated</i>)
Opportunity (growth/regrowth /recovery)	Full season (growth)	+2
Total:		0 neutral effect

Cumulative Effects: Past and present land uses such as oil and gas development and livestock grazing are expected to continue to occur in the future. These uses will include surface disturbance ranging from complete removal of vegetation for construction and development of oil and gas pads and infrastructure to varying levels of disturbance associated with livestock trailing and trampling and utilization of forage resources. Potential impacts associated with oil and gas development should be addressed with project specific BMPs. Livestock grazing as currently permitted occurs generally late in the growth period after plants have had the opportunity to grow and set seed. On years with average precipitation, some regrowth after the grazing period should occur in some pastures to provide litter for soil surface protection. Aside from potentially more trailing associated with the longer use period and travel to and from fewer available water sources, there should be minimal if any cumulative effects to vegetation under this alternative. Over time the cover and composition of forage plants would be expected to improve with responsive livestock management.

Environmental Consequences of No Livestock Grazing (Alternative C):

Direct and Indirect Effects: Refer to CO-110-2007-30-EA, page 26 for a more detailed analysis of the alternative summarized here. No grazing by livestock would be a 100 percent reduction in livestock grazing. Utilization of forage species would be limited to wildlife use resulting in slight to light use across many areas of the allotment. Increased residual vegetation throughout the allotment would allow more opportunity for seed dispersal and seedling establishment. In the absence of livestock grazing both cover and composition of perennial forage species would increase with the improved opportunity to meet physiological needs. Direct benefits would be greatest in areas previously easily accessed by livestock. In the areas dominated by invasive annuals (cheatgrass) improvements in plant community composition would be minimal without intervention. Early seral sites with intact but suppressed perennial plant communities would experience a favorable shift in plant community composition. Mid-seral plant communities would likely experience the greatest benefit of increased perennial plant cover.

Cumulative Effects: Past and present oil and gas development is expected to continue to some degree in the future. This use will include surface disturbance including complete removal of vegetation for construction and development of oil and gas pads and infrastructure in localized sites. Without livestock grazing there would be no impacts associated with trailing and

trampling. Consumption of forage resources would be limited to slight utilization by deer and elk resulting in more litter accumulation to protect soil surfaces, to improve infiltration, and to provide organic content to the soils. Plant community cover and composition in most range sites would improve in the absence of livestock grazing.

Mitigation: None.

Finding on the Public Land Health Standard #3 for Plant and Animal Communities: In 2006, 11 percent of the BLM acres in the Blacks Gulch allotment were not meeting the Public Land Health Standards for Plant and animal communities. Some of the mid-seral sites were considered to be on a threshold for improvement or further degradation dependent on future livestock grazing management. Implementation of the Proposed Action would result in short duration impacts associated with livestock grazing. Forage plants would have the majority of the growth period for growth, regrowth, and recovery after being grazed. If implementation of this alternative results in unexpected impacts to soils or plants, adjustments in the period of use would have to be made. If soils recover adequately during the un-grazed period, this proposed grazing schedule should result in improvements in native perennial plant cover and composition throughout the allotment. Continuation of the Current Management alternative would give forage plants deferment from grazing pressure early in the growing season but allow them minimal to no opportunity for regrowth and recovery after livestock grazing. Impacts to soils associated with trailing would be in the general areas near water sources. If portions of the allotment are not usable due to lack of reliable water sources, impacts would be more concentrated and adjustments to the grazing schedule would have to be made. This alternative would not meet the operational needs of the livestock operator. Implementation of the no grazing alternative would result in the most rapid improvements in rangelands toward meeting this Standard.

With responsible livestock management implementation of either the Proposed Action or the Continuation of Current Management alternative should allow most rangelands throughout the Blacks Gulch allotment to make improvements toward achieving the Standards for Public Land Health for plant and animal communities.

INVASIVE, NON-NATIVE SPECIES

Affected Environment: Refer to CO-110-2007-30-EA, page 21 for a more detailed description of the following summary. The Blacks Gulch allotment has scattered infestations of several noxious and invasive species that are listed on the state of Colorado noxious weed list. There are no weeds from List A species in the allotment. Weed species present from List B include musk thistle (*Carduus nutans*), bull thistle (*Cirsium vulgare*), Canada thistle (*Cirsium arvense*), houndstongue (*Cynoglossum officinale*), spotted knapweed (*Centaurea maculosa*), Russian knapweed (*Acroptilon repens*), diffuse knapweed (*Centaurea diffusa*), yellow toadflax (*Linaria vulgaris*), hoary cress (*Cardaria draba*), and tamarisk (*Tamarix spp*). The list C species are common burdock (*Arctium minus*), common mullein (*Verbascum thapsus*), and cheatgrass (*Bromus tectorum*). Infestations are on both public and private lands throughout the allotment though cheatgrass is more prevalent in the lower pastures.

Tamarisks are established in the three main drainages of the allotment (Blacks Gulch, Tschuddi Gulch and Scenery Gulch). In 2005 a tamarisk eradication effort was undertaken by BLM in Scenery Gulch on public lands below the private land boundary. All tamarisks in approximately four miles of the drainage were cut to the ground followed by an herbicide application. Minimal re-sprouting has occurred though new plants have likely germinated. As the distribution of the Tamarisk Leaf Beetle (*Diorhabda carinulata*) expands in northwest Colorado tamarisk will likely be negatively affected, reducing its presence in many areas where it is currently invading.

A 20 acre infestation of Russian knapweed located on private lands, extending onto public land in Scenery Gulch has been repeatedly treated in a joint effort by Rio Blanco County and BLM. This infestation has nearly been eradicated and follow-up treatment will continue into the future. The extent of the white-top infestation is currently confined to the private land in Scenery Gulch on the roadside and the general area around the privately owned cabin. Without aggressive control efforts by the landowner or lessee this infestation will likely expand rapidly. Houndstongue and the thistle species are mostly scattered throughout the valley bottoms and slopes of the upper pastures on both public and private lands. The few infestations of spotted and diffuse knapweed are present in the Tschuddi pasture. The infestation of yellow toadflax is in a side draw toward the upper end of Scenery Gulch.

In the past heavy utilization and long duration grazing favored the continued spread of noxious weeds as native forage species were grazed through the growing season. Below average precipitation during the growing season for several years further stressed the native plant communities. Between drought stress and grazing pressure native grasses especially in the lower pastures were less able to compete with invasive weeds as is evidenced by the pervasive amount of cheatgrass and other weedy annual species throughout some of these plant communities. Grazing schedules that would reduce the amount of time forage species are grazed and improve their opportunity for growth or regrowth would likely strengthen the native plant communities allowing them to compete better against noxious and invasive plant species.

In the summer and fall of 2010 the permittee coordinated with the Rio Blanco and completed extensive weed spraying in the privately owned valley bottoms of the Tschuddi Gulch pasture. The permittee is in the process of upgrading his weed spraying equipment for use in the allotment. Targeting the white-top infestation is a top priority for spring 2012. Additionally they hope to contract for larger scale aerial weed spraying in the private bottoms of Scenery and Tschuddi gulches.

Regardless of the grazing program the extent and amount of noxious weeds present throughout this allotment will require concerted on-going control efforts by both the BLM and the private land owners/lessees to control and reduce the presence of weeds.

Environmental Consequences of the Proposed Action (Alternative A):

Direct and Indirect Effects: The Proposed Action will result in high intensity, short duration grazing in each pasture of the allotment. Livestock will graze each pasture for an average of 16 days relying to some extent on the previous year's production and to a lesser extent on the early growth. After livestock leave each pasture, forage plants will have the majority of the growing season remaining to grow, regrow, set seed, and replenish their nutrient

reserves. Indirectly this should allow native plant communities to compete better with noxious weeds.

Cumulative Effects: Past and present land uses including oil and gas development and livestock grazing in this allotment have contributed to the introduction and spread of noxious and invasive plants throughout this area. Given the nature of noxious and invasive plant species their continued presence in areas of infestation and progressive spread is expected. It is anticipated that the current land uses will continue, further contributing to the spread of noxious weeds. The short duration of the proposed grazing schedules should allow native plant communities an improved opportunity for regrowth to meet their physiological needs and compete to slow the spread of noxious and invasive weeds. Future weed control efforts by the land owner, livestock operator, and BLM will be necessary to reduce the presence and spread of these weeds.

Environmental Consequences of Continuation of Current Management (Alternative B):

Direct and Indirect Effects: Refer to CO-110-2007-30-EA page 23 for detailed analysis of this alternative, listed as the Proposed Action alternative in that document. In summary the continuation of current management will provide pastures with some deferment from grazing during the growth period every other year. Each pasture would be grazed for an average of 32 days through the growing season. In years with average precipitation through the growing season, forage species would usually have some opportunity for regrowth after the grazing period. The deferred grazing would allow plants to grow prior to being grazed every other year allowing them that opportunity to produce seed and restore their nutrient reserves.

Cumulative Effects: Past and present land uses including oil and gas development and livestock grazing in this allotment have contributed to the introduction and spread of noxious and invasive plants throughout this area. Given the nature of noxious and invasive plant species their continued presence in areas of infestation and progressive spread is expected. It is anticipated that the current land uses will continue further contributing to the spread of noxious weeds. The grazing schedules of this alternative should allow native plant communities opportunity to persist and compete to slow the spread of noxious and invasive weeds. Future weed control efforts by the land owner, livestock operator, and BLM will be necessary to reduce the presence and spread of these weeds.

Environmental Consequences of No Livestock Grazing (Alternative C):

Direct and Indirect Effects: Refer to CO-110-2007-30-EA, page 26 for a more detailed analysis of the alternative summarized here. Generally with no grazing by livestock native plant communities, especially in areas with intact plant communities, would have full opportunity to flourish and compete with noxious and invasive weeds. The proliferation of invasive annuals would be reduced as the interspersed native grass community when relieved from grazing pressure would have improved ability to compete. Early seral areas presently dominated by weedy annual species would likely show minimal improvement over time. Soil disturbance and weed seed dispersal associated with livestock use would be eliminated. Contributions by the land owner or livestock operator toward weed control on public lands would cease. If weed control efforts were not continued on private lands, untreated weeds would continue to spread onto public lands.

Cumulative Effects: Past and present land uses including oil and gas development and livestock grazing in this allotment have contributed to the introduction and spread of noxious and invasive plants throughout this area. Given the nature of noxious and invasive plant species their continued presence in areas of infestation and progressive spread is expected. Continued oil and gas development would continue contributing to the spread of weeds. Over the long term, no grazing by livestock would allow rangelands the greatest opportunity to compete against noxious and invasive weed species. To prevent unimpeded spread of weeds, control efforts by both the BLM and the private land owner would be necessary.

Mitigation: Noxious weed infestations on the Blacks Gulch allotment shall be treated in a manner consistent with BLM protocol as outlined in the White River ROD/RMP. For noxious weed populations on BLM administered lands, weeds will be treated by a certified pesticide applicator either by the BLM or permittee. The permittee will be responsible for coordinating and implementing appropriate weed control measures where livestock grazing practices result in the spread of noxious weeds on BLM lands.

SPECIAL STATUS ANIMAL SPECIES

Affected Environment: There are no threatened or endangered animal species that are known to inhabit or derive important direct use from the Blacks Gulch allotment. The major drainages on the Blacks Gulch allotment generally empty directly into the White River on either side of Rio Blanco Lake. The White River below Rio Blanco Lake is designated critical habitat for the endangered Colorado pike-minnow although present occupation is confined to the river below Taylor Draw dam (47 river miles downstream). Maintenance of proper bank, channel, and floodplain functions are specifically identified in the Recovery Program for Endangered Fishes of the Upper Colorado River Basin as essential to the continued existence of this fishery.

Greater sage-grouse: Colorado Parks and Wildlife (CPW) has mapped sage-grouse distribution in the Blacks/Wray Gulch area as a 13 square-mile parcel containing about 4,600 acres of sagebrush generally suitable for year-round use by sage-grouse. This parcel is separated from the nearest occupied habitat in Indian Valley by about nine airline miles and from historic distribution on Stadtman Mesa by about 10 airline miles. The Blacks Gulch pasture is the only portion of the Blacks Gulch allotment known by WRFO to support sage-grouse activity. The pasture encompasses the bulk (about 60 percent) of sagebrush-dominated habitat best suited for grouse occupation (1,257 habitat acres) within the allotment, but functionally probably represents virtually all the allotment's habitat base. WRFO has sparse, but regular records of sage-grouse in the Blacks and Wray Gulch area since 1984 that span all seasonal use functions (nesting, early brood, late brood, winter).

More recently (2010-2011), CPW documented a 5-bird lek within the Blacks Gulch pasture and WRFO subsequently found 11 birds wintering near this site in January 2012. BLM-administered sagebrush shrublands suited for sage-grouse in the Homestead/Wray pastures is limited to about 94 acres or about 5 percent of the sage-grouse habitat available in the allotment. The Middle pasture ostensibly contains about 434 acres of suitable sagebrush habitat (~21% of habitat in allotment), but these shrublands tend to be more discontinuous and isolated

from more contiguous central habitats by intervening juniper stands, and steep, rocky or barren, badland slopes.

Removed from the lek by 2.3 to 4.3 miles (Homestead/Wray) and 2-3 miles (Middle), habitat encompassed and offered by these three pastures is likely to support relatively low sage-grouse nest densities (compared to the Blacks Gulch pasture). Much of this pasture's bottomland habitat is composed of sagebrush-greasewood shrubland with poorly developed understories dominated by invasive annual forbs and grasses, but possessing modest native bunchgrass and perennial forb elements. The upland Wyoming sagebrush communities that bear the majority of current grouse use are better represented by intact perennial bunchgrass understories, although up to 40 percent of these low ridge and benchlands are also dominated by invasive annuals. Residual bunchgrass growth during the open winter of 2012 represented a year of exceptional spring moisture and light early spring 2011 cattle use. Bunchgrass expression was sufficiently dense and tall (6-8 inch) to provide effective concealment (as supplement nest cover) within and among the moderate density sagebrush canopies.

Reproductive functions (breeding, nesting, and brood-rearing) are considered the most important grazing-related aspect of sage-grouse biology. Based on dates derived from CPW studies in Axial Basin (comparable elevation to the project area), lekking would occur from late March through late April, most nesting would take place from mid-April through late May, and most broods would appear from mid-May through early June.

Northern goshawk: Goshawks occur throughout the Resource Area at extremely low densities. In general, they prefer to nest in mature aspen or mixed stands, however mature pinyon-juniper woodlands and isolated Douglas fir stands - which comprise the slopes of the three higher elevation pastures (Scenery, Tschuddi and Oil Well pastures) and the northeast finger of the Middle pasture - have been known to provide suitable nesting substrate. The BLM has no records of nesting activity in the vicinity of the allotment.

Brewer's sparrow: Brewer's sparrows, another BLM-sensitive species are common and widely distributed in virtually all big sagebrush, greasewood, saltbush, and mixed brush communities throughout the allotment. These birds are typically one of the most common members of these avian communities and breeding densities generally range between 10-40 pairs per 100 acres. Although most abundant in extensive stands of sagebrush, the birds appear regularly in small (one to two acre) sagebrush parks scattered among area woodlands. Typical of most migratory passerines in this area, nesting activities normally take place between mid-May and mid-July.

Bald eagle: The White River corridor serves as an activity hub for nesting and wintering populations of threatened bald eagles. A number of nest and winter roost sites are associated with the river's cottonwood galleries, but none of these features are encompassed or directly influenced by proposed activities within the allotment.

Environmental Consequences of the Proposed Action (Alternative A):

Direct and Indirect Effects: The proposed grazing schedule would potentially have the most noticeable influence on Brewer's sparrow and greater sage-grouse. Impacts to Brewer's sparrow are integral to analysis relating to shrubland associates in the Migratory Bird section.

Greater sage-grouse: Blacks Gulch pasture: Proposed livestock use of the Blacks Gulch pasture would not vary between years and would involve 17 days use by 600 cattle. Use would occur prior to the growing season (mid-March – early April) and rely principally on previous year's growth. Use intensity relative to current levels would vary from 21% less to 6% more. Early and short duration use would likely promote more uniform and less selective utilization with no opportunity for repeat defoliations. This use pattern would coincide with the first 10 days of the strutting period; cattle would be absent from this pasture by the time any nesting was initiated. Although there is no indication in the literature that livestock use interferes with breeding activity per se (Colorado Greater Sage-Grouse Steering Committee, 2008), high livestock density, particularly during years of limited moisture or snowpack and in close proximity to stock ponds, could conceivably have an influence on lek attendance early in the strutting period (the lek lies within ¼ mile of two stock ponds). Early season lek attendance is typically more sporadic and less productive than mid to late April peaks in breeding activity and is unlikely that disturbance early in the cycle would thwart successful reproduction.

Overwinter residual forage would largely be removed by early April throughout the pasture and little herbaceous cover would be expected to remain in openings between shrub canopies. Use intensity would not be expected to involve bunchgrass growth within individual shrub crowns and this growth would continue to serve as supplemental concealment of the nest and incubating hen. Importantly, this grazing pattern would allow for full growing season expression, with near-peak ground cover density and height coinciding with the appearance of broods – optimizing both protective cover and the availability of succulent broadleaf herbaceous matter as forage and invertebrate substrate for adult and chick diets. Especially in response to past grazing influences, this grazing regimen would also be expected to promote improving trends over time in understory density and composition and help revert up to 40 percent of the uplands and most of the bottomlands from annual-dominated to perennial bunchgrass character. Although the availability of overwinter residuals would be largely foregone in this alternative (i.e., use intensity), historic grazing regimens and current ecological status did not present interstitial cover substantially different than this. In an overall sense, the proposed grazing use pattern is as complementary to optimal sage-grouse management as possible.

Homestead/Wray pastures: The Proposed Action would apply high intensity, short duration use in alternate years—once in early April and then in late April. Use intensity would be about 70 percent of that presently authorized. Grazing use in one year would take place just prior to nest initiation and influence grouse nest and brood-rearing habitat in a manner similar to that discussed for the Blacks Gulch pasture (especially the more complete removal of previous year's ground cover residuals). The following year's use would take place during the first two weeks of nesting, but would allow a minimum 2-3 weeks of herbaceous growth through the remaining nest period and prior to the appearance of broods.

Middle Pasture: The Proposed Action would apply grazing use at intensities similar to the greater year of current authorized use, but reduces its duration to that of the lesser. Too, the timing of grazing use would be shifted sharply into the months of April and early May. This regimen, similar to the discussions in other pastures, would decrease standing previous-year residuals and early emerging growth just prior to nesting peaks in one year and during the

earliest quartile of nesting in the other. In both instances, livestock removal would allow for 1-4 weeks of herbaceous recovery prior to the earliest appearance of broods, as well as progressive development of ground cover through the entire brood period.

The proposed grazing schedule is not anticipated to have measurable influence on northern goshawk nesting activity. Although livestock use will be concurrent with early portions of the nesting season, livestock typically make limited use of forested, steep slopes which tend to have the greatest potential as nesting habitat for northern goshawk.

Cumulative Effects: Similar to the No Grazing Alternative, the Proposed Action would contribute little, if any, to cumulative adverse effects on special status animals and in particular, sage-grouse, since its effects are decidedly in favor of improved herbaceous expression (e.g., repressing invasive annuals, improved concealment and forage substrate) and are largely compatible with sage-grouse and other avian (e.g., Brewer's sparrow) reproductive functions and recruitment.

Environmental Consequences of Continuation of Current Management (Alternative B):

Direct and Indirect Effects: Environmental Consequences of the Current Management Alternative (see Proposed Action, page 32 in CO-110-2007-030-EA) are incorporated by reference. Incremental improvements in long-term community trends in both upland and riparian communities would be expected under this alternative, increasing the density and improving composition of perennial grasses and forbs on an overall basis benefiting wildlife populations as a whole. Continued weed suppression and improvements in ground cover would help reduce noxious weed infestation. Negligible direct impacts to northern goshawk nesting activities would be expected under this alternative. Impacts to Brewer's sparrow would be identical to discussions in Continuation of Current Management alternative in the Migratory Bird section.

Greater sage-grouse: Blacks Gulch pasture: Current livestock use of the Blacks Gulch pasture involves 23-42 days of growing season use by 325-425 cattle. This use coincides with the nesting/early brood-rearing period (late April – early June) and much of the brood-rearing period (June) in alternate years. In one year, attrition of ground cover as concealment for nests and early broods, in particular, would begin early in the nest season and reach maximum levels as broods appeared. Recovery of effective ground cover height would progress through the brood period, but would be least effective when broods are most vulnerable to predation and exposure. In the alternate year, grazing use would begin early in the brood period and progress late into the growing season. Nesting cover would be supplemented by modest over-winter residuals and increase with developing growth until early June as broods appear. Herbaceous density and height would decline gradually through the brood period until maximum reductions are achieved as chicks gain weak flight capabilities. With limited regrowth into the dormant season, the following nest season would benefit little from overwinter residuals.

Current use patterns would generally provide limited regrowth/plant recovery in years when grazing use ends in early June, but little opportunity for herbaceous regrowth/recovery in alternate years (ending by early July). Under this grazing regimen, it is likely that the composition and density of herbaceous ground cover as supplemental nest and brood cover would remain static overall, and may be expected to slowly deteriorate in close proximity to

available waters (nearly 80 percent of the sagebrush habitat occupied by sage-grouse in this pasture lie within 0.5 mile of stock ponds).

Homestead/Wray pastures: Current livestock use is relegated to the first half of May every other year (middle of nesting season) with higher intensity, shorter duration use (but comparable number of AUMs) taking place just prior to hatch in alternate years. Both season-of-use patterns allow for redevelopment of herbaceous understories (4-6 weeks) and maintenance of community vigor, but result in moderate reductions in the effectiveness of ground cover during the nesting season and just prior to hatch.

Middle Pasture: Grazing currently authorized takes place over 19 and 34 days (alternate years) from early June to mid-July (the entire early brood period) and early to mid-July (later half of early brood). The longer duration use period, in particular, involves the latter half of the growing season (little potential for herbaceous redevelopment prior to dormancy and available for following year nesting cover) and progressive declines in effective ground cover through the early brood period, which becomes most pronounced prior to broods gaining limited flight capability. The alternate year use moderates these effects by beginning later in the brood period with 30 percent reductions in grazing intensity.

Cumulative Effects: Continuation of the current level of livestock grazing is not expected to add substantially to existing or proposed disturbances. Continuation of current management, that includes at least periodic bouts of longer duration growing season use, carries a long-term risk of contributing incrementally to sage-grouse range with ground cover represented by increasing fractions of invasive annuals and grazing-tolerant introduced grasses (e.g., Kentucky bluegrass). In the short term, habitat conditions would be expected to remain static, but offer no prospects of bolstering the viability or persistence of this small, isolated population of sage-grouse.

Environmental Consequences of No Livestock Grazing (Alternative C):

Direct and Indirect Effects: Environmental Consequences of the No Grazing Alternative, (see No Grazing Alternative, page 33 in CO-110-2007-030-EA) are incorporated by reference. Indirect effects of noxious weeds on aquatic habitats would be similar to those discussed in Alternative B. Livestock removal is not expected to have any measurable influence on the abundance or reproductive success of northern goshawk throughout the allotment's woodland habitats.

Greater sage-grouse: Blacks Gulch pasture: The absence of livestock grazing would prompt improving trends in understory character in a manner virtually identical to that presented in the Proposed Action. The singular difference would involve the retention of previous year's residual ground cover that would optimize concealment of the nest and hen from predators and microclimatic factors at the nest (e.g., temperature and humidity buffer thought to enhance embryo survival and hatching). Since heavy and prolonged snow packs can modify the effective cover values provided by previous year ground cover, it is debatable whether the benefits of overwinter residuals are as influential to nest success and hen survival than the progressive development of fresh herbaceous growth.

Homestead/Wray pastures: Similar in nature to that discussion for Blacks Gulch pasture.

Middle Pasture: Although the absence of grazing would allow full ground cover expression in the pasture's sagebrush parks and optimize potential nest and brood-rearing conditions, it is uncertain whether sage-grouse would make substantive use of this pasture's sagebrush configurations.

Cumulative Effects: There would be no contribution from livestock grazing to previous or existing disturbances in the area that would potentially impact special status animal species or important habitats under the No Grazing Alternative.

Mitigation: Applicable to Alternative A – Proposed Action only: To retain the benefits provided by the Proposed Action, particularly for sage-grouse, it is suggested that the Limits of Flexibility as applied to the Blacks Gulch pasture be limited to no more than 7 days beyond the prescribed 1 April off-date (earlier on-dates of no consequence).

Finding on the Public Land Health Standard #4 for Special Status Species: This allotment's land base has relatively limited potential to influence most special status animal populations and habitats. Implementing improved livestock management in conjunction with vigilant and coordinated chemical weed control would help retard the proliferation of noxious weeds and indirectly reduce the contribution of weed seeds to the White River and its endangered fish and threatened bald eagle habitat and would complement meeting of the standard. Current management, although incorporating coordinated weed control efforts, would likely result in incremental long-term increases in the susceptibility of lower elevation pastures to noxious weed infestations and would thereby contradict continued meeting of the standard. The no-grazing alternative would allow for improvements in range condition at rates likely accelerated over the Proposed Action, but would likely jeopardize private participation in weed control efforts that could present a persistent upstream source of noxious weeds (private lands) that would be disassociated from any BLM involvement.

With specific reference to sage-grouse, and similar to a no grazing option, the Proposed Action offers a management strategy that would not only promote gradual improvements in the character and extent of native bunchgrass communities as a source of cover and forage for nesting and brood-rearing functions, but is applied in timeframes that do not generally interfere with the role of ground cover in supporting important sage-grouse reproductive functions. Current management would continue to meet the land health standards at a landscape scale and in the short term, but offers little to elevate conditions in the long term that better reflect the potential of these ranges to function as sage-grouse nest and brood-rearing habitat and thereby contribute to recovery of the species.

MIGRATORY BIRDS

Affected Environment: The permit area spans an array of elevations and vegetation communities that support a wide variety of migratory birds during the nesting season (early May through mid-July). The four lower-elevation pastures (Blacks Gulch, Homestead, Middle and

Wray Gulch) are represented primarily by Wyoming and basin big sagebrush communities (~ 7,800 ac), with greasewood co-dominating in most of the drainage bottoms. Herbaceous understory is dominated by invasive annuals such as bur buttercup, redstem filaree (storksbill), cheatgrass, and flixweed with a residual component of perennial species, namely western wheatgrass and sandberg bluegrass. Pinyon-juniper woodlands (~ 4,000 acres) are confined to the eastern edge of Blacks Gulch and Middle pastures, with juniper-dominated stringers along the ridgelines of Middle, Homestead and Wray Gulch pastures.

The steep, upper-elevation slopes of Scenery, Tschuddi and Oil Well pastures are dominated by pinyon-juniper woodlands (~6,400 ac) with a shrub/grassland understory (~5,000 ac). Drainage bottoms are comprised mainly of basin big sagebrush with a heavy greasewood and Wyoming big sagebrush component along the toe slopes. Herbaceous groundcover in these drainages is often dominated by undesirable species such as cheatgrass, mustard, yarrow and dandelion but does contain a minimal perennial component (e.g., basin wild rye, western wheatgrass and sandberg bluegrass). Houndstongue and musk thistle are common, particularly in the upper portions of Scenery and Tschuddi Gulches.

Birds of higher conservation interest (i.e., Partners in Flight program) associated with these habitats and well represented in the permit area include: black-throated gray warbler, juniper titmouse, pinyon jay (pinyon-juniper communities), Brewer's sparrow, Virginia's warbler and green-tailed towhee (sagebrush and mountain shrub habitats). It is likely that the full complement of pinyon-associated species such as white-breasted nuthatch, black-throated gray warbler and pinyon jay are greatly reduced in those lower-elevation juniper-dominated woodlands.

Environmental Consequences of the Proposed Action (Alternative A):

Direct and Indirect Effects: Proposed grazing periods would not coincide with and would have limited potential to directly influence migratory bird nesting activities in the Blacks Gulch, Middle, Homestead/Wray and Oil Well pastures. Proposed use of these pastures would take place prior to the migratory bird nesting season annually and although grazing use would likely result in the reduction of residual cover (see discussion below), direct impacts (trampling, nest disruption etc.) to nesting activities would be avoided.

The proposed grazing system would be high intensity-short duration occurring prior to or early in the growing season. Table 27 compares the proposed vs. current livestock use (total AUMs).

Table 27. Comparison of Total AUMs in Proposed and Current Grazing Systems

Pasture	Proposed AUMs (total)		Current AUMs (total)		Difference in AUMs (%)	
	Even	Odd	Even	Odd	Even	Odd
Black's Gl.	355	355	449	335	-21	6*
Middle	355	355	407	265	-13	31*
Homestead/Wray	138	138	200	196	-31	-30
Oil Well	217	217	273	279	-21	-22
Tschuddi	355	414	427	447	-17	-7
Scenery	414	355	459	419	-10	-15

*denotes and increase in AUMs

Livestock removal by early May in the Blacks Gulch, Middle, Homestead/Wray and Oil Well pastures would essentially allow for uninfluenced (by livestock grazing) vegetative growth during the entire growing season. Grazing onset of mid-March through late-April would likely reduce effective ground cover (height and lateral density) and residual cover prior to the nesting season and, depending upon the year and pasture, may have the potential to indirectly affect nesting outcomes by increasing the susceptibility of incubating or brooding hens and their clutches to predation or extremes in temperature or moisture. This impact would likely have minor influence on ground nesting species (e.g., meadowlark, lark sparrow) associated with open shrubland and grassland habitats and would be most evident in the Oil Well (even year) and Middle (odd year) pastures where livestock remain until early May. In most instances, removal of livestock by early April to late April would allow sufficient time (~ up to 6 weeks) for growth and/or regrowth/recovery prior to the onset of the nesting period and would have negligible impacts on most species associated with grassland and shrubland communities.

Current livestock use in Scenery and Tschuddi pastures does not coincide with the migratory bird nesting period. Under the proposed schedule, livestock grazing would be synchronous with portions of the migratory bird nesting season in both pastures. Each pasture would be grazed 18 days (5/8 – 5/25) and 21 days (5/26 – 6/15) with number of days in the respective pastures alternating each year. Much of the BLM-administered lands within these pastures consist of rugged, pinyon-juniper dominated slopes or mountain shrub communities. While livestock may make use of these woodland and mountain shrub types, use is typically light and dispersed with woodland/mountain shrubland associated species being minimally influenced by grazing practices. The most noticeable influence of the grazing system would be on grassland and open shrub associates that nest in areas that receive more heavy or concentrated livestock use (valley bottoms, mild terrain), which are largely privately-owned or in areas that are in close proximity to a water source.

Overall, the proposed grazing system is expected to benefit migratory birds in the long-term. Based on estimated GRI assessments (Tables 14 – 19) in the Vegetation section, the proposed grazing system should provide an overall benefit to vegetation throughout the allotment – allowing for enhanced perennial ground cover, improved plant vigor and an increase in native grasses and forbs. Reductions in total AUMs (see Table 27) would also be expected to elicit a similar response. This alternative is consistent with plant growth requirements and continued improving trends in ground cover composition and plant vigor, but would probably have little short-term influence on understory conditions across those ~2,800 acres of early-seral bottomland and lower elevation sagebrush/grasslands (particularly in Blacks Gulch, Middle and Homestead pastures) where annual weeds exert strong competitive influences. Without significant intervention, these habitats would continue to serve in a limited capacity for migratory bird breeding activities regardless of the grazing management option employed. Commitment from the permittee for continued treatment of noxious weeds would improve vegetative composition which would benefit shrubland and grassland associated migratory bird species. It is important that monitoring continue to ensure the proposed grazing system is compatible with continued maintenance that support migratory bird nesting functions.

Cumulative Effects: The proposed grazing system is not expected to add substantially to existing or future disturbances. As proposed, livestock grazing will occur prior to or during the

early portions of the growing season and although this would result in the reduction of ground cover, livestock removal by mid-June would allow adequate time for growth/regrowth opportunities. It is expected that over time the proposed grazing system will allow for improvements in vegetative cover and composition which would be expected to benefit migratory bird species.

Environmental Consequences of Continuation of Current Management (Alternative B):

Direct and Indirect Effects: Environmental Consequences of the Current Management (see Proposed Action, page 28 in CO-110-2007-030-EA) are incorporated by reference. Overall grazing influences under this alternative would generally be compatible with migratory bird nesting activity but would likely result in minor suppression of nest density or optimal recruitment at least in the short-term. In the long-term ground cover conditions (increased plant vigor, density and diversity of perennial species) would likely respond positively. It is unlikely this alternative would lend to any improvements in the approximately 2,800 acres of early seral bottomlands which are dominated by annual weeds.

Cumulative Effects: Continuation of the current grazing schedule is not expected to add substantially to existing or proposed disturbances. Reductions in ground cover associated with current livestock use are generally compatible with continued maintenance of habitats which support migratory bird nesting functions. Overall reductions in ground cover associated with livestock grazing may suppress nest densities throughout the sagebrush and grassland communities; however this is not expected to have any measurable influence on local bird populations.

Environmental Consequences of No Livestock Grazing (Alternative C):

Direct and Indirect Effects: Environmental Consequences of the No Grazing Alternative, (see No Grazing Alternative, page 31 in CO-110-2007-030-EA) are incorporated by reference. Livestock removal is expected to have little effect on breeding bird abundance or reproductive success in the allotment's 10,000 acres of woodland types or in those pastures where grazing is asynchronous with the migratory bird nesting season. The most noticeable response would be in those areas that currently experience concentrated and prolonged livestock use. Increases in herbaceous density, height and horizontal cover would be expected to yield measureable positive responses in nongame bird populations.

Cumulative Effects: There would be no contribution from livestock grazing to previous or existing disturbances in the area that would potentially impact migratory bird species or important habitats under the No Grazing Alternative. Livestock removal would result in improvements in vegetative composition as well as increases in residual component which would benefit not only migratory birds, but local wildlife populations in general.

Mitigation: The grazing system may be modified should monitoring indicate the revised grazing schedule is incompatible with continued maintenance of vegetative communities that support migratory bird nesting activities or is adversely impacting forage and cover resources important to migratory birds.

AQUATIC WILDLIFE

Affected Environment: Aquatic habitats/riparian areas potentially influenced by livestock on BLM-administered lands within the permit area consist of Scenery Gulch (7.3 miles), Tschuddi Gulch (5.2 miles) and Blacks Gulch (1.5 miles). Due to intermittent flows and heavily degraded channels, Scenery Gulch and Blacks Gulch are incapable of supporting higher order aquatic habitats. Although Tschuddi Gulch currently supports small and discontinuous populations of leopard and chorus frogs, it is not capable of sustaining a viable fisheries population.

Dominant riparian species associated with these drainages include Baltic rush and inland saltgrass. Other riparian associates that are present but at extremely low densities include sedges, bulrush, and redtop. Tamarisk, an invasive, non-native is common throughout all three drainages with increasing frequency in the lower (southern) portion of these drainages.

Environmental Consequences of the Proposed Action (Alternative A):

Direct and Indirect Effects: Overall, proposed grazing use of the allotment is expected to benefit aquatic systems that support aquatic wildlife or contribute to those system that support aquatic wildlife. Estimated GRI assessments (see Tables 21 - 26) indicate either a neutral or beneficial response of vegetation under the proposed grazing system. Improvements and increases in perennial ground cover would be expected to, in the long-term, reduce sediment contributions to Scenery, Blacks and Tschuddi Gulches. Over time, improvements in channel character (e.g., improved bank stability, increased/enhanced riparian expression and prolonged surface flows) would likely promote a moderate increase of amphibian species associated with these channels as well as potential reestablishment along the Blacks and Scenery Gulches.

Although unknown at this time, a potential drawback to this grazing system may be damage to soils due to excessive hoof impact and trampling during wet soil conditions, particularly in those lower elevation pastures which would receive use during the early spring (Middle, Homestead/Wray). See also discussion in Riparian Wetlands and Soils sections. Continued monitoring efforts will be important to assess potential livestock-related damage to aquatic habitats.

Cumulative Effects: The proposed grazing system is not expected to add substantially to existing or future disturbances in the area. Reductions in ground cover would be expected under this alternative; however over time, vegetative density, vigor and diversity would be expected to improve from current conditions throughout the allotment, leading to progressive improvements in aquatic channel characteristics.

Environmental Consequences of Continuation of Current Management (Alternative B):

Direct and Indirect Effects: Environmental Consequences of the Proposed Action, page 77 in CO-110-2007-030-EA are incorporated by reference. Reductions in overland flow attributable to increased perennial upland ground cover are expected to improve channel stability, prolong surface flows and enhance expression of obligate riparian and wetland vegetation, which may result in increased populations or reestablishment of leopard and chorus frogs along Tschuddi, Blacks and Scenery Gulches.

Cumulative Effects: Continuation of the current grazing schedule is not expected to add substantially to existing or proposed disturbances. Although reductions in ground cover

associated with current livestock use would be expected, these reductions are not anticipated to negatively influence local aquatic wildlife populations or negatively impact habitat quality.

Environmental Consequences of No Livestock Grazing (Alternative C):

Direct and Indirect Effects: Environmental Consequences of the No Grazing Alternative, page 78 in CO-110-2007-030-EA are incorporated by reference. The effects of no-grazing would be similar to those of the Proposed Action, although full vegetation expression realized every year would likely lead to indeterminate acceleration of gains in the density, vigor, and composition of upland and channel vegetation and associated wildlife forage and cover values.

Cumulative Effects: There would be no contribution from livestock grazing to previous or existing disturbances in the area that would potentially impact aquatic species or associated habitats under this alternative. Livestock removal would increase perennial upland ground cover which would reduce overland flow and sediment contributions to Scenery, Blacks and Tschuddi Gulches. As a result, improvements in channel stability and vegetative cover would be expected, improving habitat for local aquatic species.

Mitigation: See mitigation described in Soils section.

Finding on the Public Land Health Standard #3 for Plant and Animal Communities: The three major drainages in this allotment are generally in a non-functional state and cannot be expected to provide aquatic habitat conditions conducive to the support of higher order aquatic communities. The Proposed Action, current management and no-grazing alternatives would, at different time-scales, prompt improvements in perennial herbaceous cover that would enhance upland infiltration and reduce the destabilizing influence of excessive sediment delivery. All three alternatives would meet the land health standard by leading to improving trends in the expression of channel vegetation and the duration of water available in the channel—both important factors in the development of habitat suitable for the support of aquatic wildlife.

TERRESTRIAL WILDLIFE

Affected Environment: The allotment spans an elevation gradient that supports lower elevation deer and elk severe winter ranges (5,800'-6,400') to higher elevation winter ranges (up to 8,100') that are used somewhat more sparingly through the summer months.

The lower elevation severe winter ranges, by definition, support 90 percent of the herd during the worst three winters of 10 and are classified by Colorado Parks and Wildlife as critical habitat (i.e., ranges that involves limited resources, the loss of which prompt reductions in population). Due to topographic features in the greater Blacks Gulch watershed, deer are generally confined to this juniper-sagebrush/greasewood complex from December through April of every year. The allotment's Blacks Gulch, Homestead, Wray, and Middle pastures are composed almost entirely of these severe winter habitats that presently support about 200-250 deer.

Wyoming big sagebrush and an intergraded Wyoming-black sagebrush constitutes the primary winter forage base for deer on these lower elevation ranges through February or March, when

deer switch to emerging herbaceous growth. The availability of quality herbaceous growth on these severe winter ranges figures prominently in recovery of deer from the nutritional deficits of winter as well as gaining nutritional planes appropriate for the later stages of gestation. Based on observations by BLM biologists, deer are feeding principally on fresh growth of Sandberg bluegrass and prairie junegrass in March and early April, making little use of western wheatgrass and no apparent use of prodigious annual growth, composed primarily of cheatgrass, clasping pepperweed, red-stem filaree, and bur buttercup, that forms the dominant ground cover on about 60 percent of the lower valley terraces in early spring (e.g., late March).

The upper three pastures (i.e., Tschuddi, Scenery, and Oil Well) involve general big game winter ranges composed of pinyon-juniper woodlands and mountain shrub with small scattered stands of Douglas-fir. Areas in close proximity to reliable water sources support a small number of deer through the summer months. These pastures are part of the greater Gray Hills and Colorow Mountain area which also supports a wide-ranging resident herd of between 500 and 1000 elk. These animals shift elevationally through the year, but perhaps $\frac{1}{4}$ to $\frac{1}{2}$ of these animals use the allotment's northern three pastures and southern four pastures during the summer and winter seasons, respectively.

Although the status of blue grouse populations in the Gray Hills is not well understood, the birds occur widely across the allotment's higher elevation mountain shrub ridges and upper sagebrush basins during the spring through fall months, and likely retire to the allotment's scattered Douglas-fir stands in the winter. Blue grouse broods tend to gravitate to mesic mountain shrub and sagebrush basins during the later summer months (mid-July through mid-August) where strong herbaceous ground cover expression, as protective cover, forage, and foraging substrate (for invertebrates) is considered one of the principal factors in realizing optimal reproductive success.

Breeding raptor use of the allotment area is represented largely by woodland accipitrine species. Mature pinyon-juniper woodlands and small stands of Douglas fir confined mainly to the upper three higher elevation pastures and the northern ridges of Middle pasture likely support a small number of breeding sharp-shinned and Cooper's hawk and long-eared owl. Other raptors (e.g., red-tailed hawk) may opportunistically forage in the allotments open grasslands.

Nongame mammals and birds using the allotment's habitats are typical and widely distributed in extensive like habitats across the Resource Area and northwest Colorado. There are no narrowly endemic or highly specialized species known to inhabit those lands potentially influenced by this action. Non-game bird and small mammal communities generally respond positively to increasing vegetation diversity, volume, and structural complexity. Particularly in the case of small mammals and shrub and ground-nesting passerine birds, increasing height and density of persistent herbaceous ground cover as a source of cover, forage (e.g., herbage, seed), and forage substrate (e.g., invertebrates) can be expected to allow for more continuously and extensively occupied habitat, increased density of breeding pairs, improved reproductive performance, and enhanced overwinter survival (mammals).

Non-game populations associated with the three higher elevation pastures, particularly in upland habitats, are likely distributed at densities that approach habitat potential. More poorly developed

herbaceous understories likely suppress breeding densities of those species associated with basin big sagebrush bottoms in the lower ends of the major drainages, but this acreage is relatively small (about 50 acres per pasture) and occurs as narrow linear features. Small mammal and bird populations in the lower four pastures would be expected to be considerably below their potential across at least 20 percent of the BLM-administered lands (i.e., early seral) including the 14 miles of degraded riparian communities (sedge-rush, inland saltgrass habitats) and at least 2,000 acres of shrubland benches along the major drainages. Non-game populations are likely suppressed, but remain relatively intact on an additional 20 percent of these pastures' extent where the ecological status of herbaceous ground cover is classified as mid-seral.

Environmental Consequences of the Proposed Action (Alternative A):

Direct and Indirect Effects: Proposed changes in grazing use would result in a short duration-high intensity use period, averaging about 18 days per pasture. The lower three pastures (Blacks Gulch, Middle and Homestead/Wray) would be used prior to or during the early portions of the growing season (mid-March through early-May); with livestock leaving these pasture by early-April through early-May. This would essentially allow for uninfluenced (by livestock) growth during the growing season annually. Proposed livestock use in these lower pastures would coincide with big game use during the early spring months. Collective use by livestock and big game likely reduces residual cover to varying degrees however; it is suspected that any influences on ground nesting birds (see Migratory Bird section) and small mammals, as it relates to cover availability would be minimal. Livestock use of heavy bunchgrass residual in the early spring likely operates to increase accessibility of emergent spring growth for big game. Improvements in vegetative cover and composition (native grasses and forbs) that would be expected under the Proposed Action would in the long-term provide an enhanced and more nutrient rich forage base for big game in much of the severe winter ranges throughout the lower pastures. It should be noted that while the roughly 2,800 acres of early seral communities may experience nominal improvements, modest improvements in vegetative composition would likely not be realized without some type of management intervention.

Livestock use in the three upper elevational pastures (Oil Well, Tschuddi and Scenery) would overlap to a certain extent with big game use periods, however topographical and vegetative features (rugged slopes, heavy shrub cover) likely constrain use, largely confining livestock to the valley bottoms and toe slopes, with big game utilizing the more rugged, shrub-dominated slopes. Recent allotment inspections indicate a strong perennial grass component interspersed throughout the mountain shrub communities with no indication of prolonged use or big game-livestock conflicts.

The proposed grazing system is not anticipated to have any substantive influence on nesting success/outcome of woodland raptors. Livestock use in the Oil Well pasture would generally occur prior to nesting onset in both even and odd years. Livestock use would be concurrent with the early to mid-portions of the nesting season (depending on year) in both the Tschuddi and Scenery pastures however, as previously stated, livestock use tends to be concentrated in areas of more open, gentler terrain with only incidental use in steeper, wooded areas. As proposed, the grazing schedule allows for sufficient regrowth/recovery opportunities to maintain adequate perennial grass and forb cover, diversity and complexity, allowing for an abundant and well distributed prey base (both small mammals and nongame birds).

Improvements in vegetative composition and density would likely provide the greatest benefit to small mammal populations and would be most noticeable in the lower three pastures. Improvements in herbaceous composition (shift to stronger perennial expression) and increased height and density of herbaceous ground cover (as a forage and cover resource) would be expected to improve reproductive success and increase small mammal densities.

Cumulative Effects: The Proposed Action is not expected to add substantially to current or future disturbances (namely oil and gas associated development). The proposed grazing system would result in annual reductions in residual and herbaceous ground cover, however this alternative allows for nearly full recovery throughout the growing season. Vegetative response in the long-term is expected to be positive, with enhanced expression of native perennial species and improvements in herbaceous density and composition which would be expected to benefit local wildlife species in general.

Environmental Consequences of Continuation of Current Management (Alternative B):

Direct and Indirect Effects: Environmental Consequences of the Proposed Action, page 80 in CO-110-2007-030-EA are incorporated by reference. Improvements in ground cover are anticipated overall however, vegetation response would vary depending on pasture, year and length of grazing period.

Cumulative Effects: Continuation of the current grazing schedule is not expected to add substantially to existing or proposed disturbances. Reductions in ground cover associated with current livestock use are generally compatible with continued maintenance of habitats which support nongame bird and small mammal populations as well as big game. Overall reductions in ground cover associated with livestock grazing may suppress migratory bird nest densities throughout the sagebrush and grassland communities; however this is not expected to have any measurable influence on local bird populations.

Environmental Consequences of No Livestock Grazing (Alternative C):

Direct and Indirect Effects: Environmental Consequences of the No Grazing Alternative, page 83 in CO-110-2007-030-EA are incorporated by reference. It is expected that livestock removal would substantially enhance the vigor and reproductive capability of perennial plants and increase accumulations of persistent litter yielding measurable positive responses in nongame bird and small mammal populations. Additionally this would provide increased quantities of favored spring forage for mule deer.

Cumulative Effects: There would be no contribution from livestock grazing to previous or existing disturbances in the area that would potentially impact migratory bird species or important habitats under the No Grazing Alternative. Livestock removal would result in improvements in vegetative composition as well as increases in residual component which would benefit not only migratory birds, but local wildlife populations in general.

Mitigation: None.

Finding on the Public Land Health Standard #3 for Plant and Animal Communities: The objectives for Land Health Standard 3 concern the maintenance of native plant and animal

communities and ecological processes that are commensurate with species and habitat potential. Indicators for meeting this standard include: minimal contribution of undesirable plant species in the community, populations of animals appropriately distributed in suitable habitat that ensures population viability, and appropriate litter accumulation across the landscape. In this context, and particularly in the three lower elevation pastures, approximately 2,800 acres of early seral shrubland and riparian habitats are failing to meet the standard, and if current trends continue, an additional 2,000 acres of mid-seral ranges are at risk of failing to meet the standard through the term of the permit. These trends and conditions are not consistent with continued meeting of the land health standard.

Under the proposed grazing system the lower elevation pastures (Black's, Wray/Homestead, and Middle) would be grazed prior to or during the early portions of the growing season, essentially allowing for growth uninfluenced by livestock for all or the majority of the growing season. This would be expected to gradually improve community composition, enhance native perennial herbaceous expression and increase plant density which by all accounts would benefit big game (more nutritional forage base during the late winter/early spring months) and nongame species (more well developed cover and forage substrate) throughout much of the allotment.

In the short term, the Proposed Action is expected to stem progressive deterioration of herbaceous community composition and vigor on about 12,850 acres of federal surface in the lower elevation pastures (Blacks, Wray, Homestead, and Middle pastures). This modified grazing use should initiate a process that would lead to long-term improvements in the density and composition of native herbaceous ground cover in riparian and upland situations, both as a forage base for big game and non-game wildlife and as effective cover for non-game species during the reproductive and winter seasons. These vegetation effects would provide for incremental improvements in the availability and nutritive quality of forage for deer in the spring and enhance the abundance and distribution of non-game wildlife in the allotment's low-elevation shrub-steppe habitats. These short term products and long-term trends are, by definition, consistent with achieving the land health standard.

The No-action alternative would be expected to achieve the same results as the Proposed Action, but would increase the volume and distribution of residual ground cover and maximize the potential vigor and reproductive capacity of native grasses and forbs and their derivative values (e.g., moisture infiltration, foraging substrate and over-winter habitat components for non-game species). Although accelerated relative to the Proposed Action, due to extant vegetation conditions, these effects would persist in being incremental and long-term.

CULTURAL RESOURCES

Affected Environment: Grazing permit renewals are undertakings under Section 106 of the National Historic Preservation Act. Range improvements associated with the allotment (e.g., fences, spring improvements) are subject to compliance requirements under Section 106 and will undergo separate standard cultural resources inventory and evaluation procedures. During Section 106 review, a cultural resource assessment (#12-018) was completed for the Blacks Gulch allotment by Kristin Bowen, WRFO Archaeologist on 12/16/2011. The assessment

followed the procedures and guidance outlined in the 1980 National Programmatic Agreement Regarding the Livestock Grazing and Range Improvement Program, IM-WO-99-039, IM-CO-99-007, IM-CO-99-019, and IM-CO-01-026. The results of the assessment are summarized in the table below. Copies of the cultural resource assessments are in the WRFO archaeology and allotment files.

Table 28. Cultural Resources Literature Review Results

CULTURAL RESOURCES LITERATURE REVIEW RESULTS				
Acres Inventoried at a Class III level	Percent of Allotment Inventoried at a Class III Level	Number of Sites Known in Allotment	High Potential of Historic Properties (yes/no)	Number of Historic Properties to be Visited
1,782	6 %	26	Yes	0
Management Recommendations (Additional inventory required and/or historic properties to be visited)			No additional cultural inventory is needed.	

Human use of the general area has occurred for at least 11,000 years, including manifestations of Paleoindian big-game hunting peoples; Archaic hunter/gatherer groups; Fremont horticulturalists/foragers; historic Ute tribes; Euroamerican and other modern peoples. Current GIS data shows 1,782 acres have been surveyed in the allotment, which is only 6 percent of the allotment. This is an approximate figure and does not necessarily represent Class III surveys that were done to current standards. Previous surveys have recorded two sites that are eligible for the National Register of Historic Places (NRHP), eighteen sites that are not eligible, and six sites that currently do not have enough information recorded and have to be treated as potentially eligible. The sites are prehistoric open lithics, open camps, and rock art, multicomponent open camps, a protohistoric open camp, and historic cabins, sheepherders' camps, bridges, brush fences, a homestead, a road, and a check dam site. Additionally 29 prehistoric and no historic isolated finds have been recorded. The sites represent a time frame from the Formative Era (c. AD 0) through the 1940s, with tentative identification of Fremont and Ute sites as well as a 1930s Civilian Conservation Corp (CCC) site. There is a high potential of finding sites in this allotment, however the majority have not been evaluated as eligible.

Seven livestock concentration areas on BLM administered lands in the Blacks Gulch Allotment were identified in 2010 by Mary Taylor, BLM WRFO Rangeland Management Specialist. There were no potentially eligible recorded sites within 200 meters of any identified cattle concentration area. In the summer of 2010 all seven concentration areas were surveyed, in several different surveys (Collins 201, Rowley 2010a, Rowley 2010b). Currently updating the literature search for the allotment has not identified any additional fieldwork needs. One eligible site, 5RB6676, a series of CCC constructed check dams was recorded in 2010 while surveying the livestock concentration areas. Livestock was determined to be a threat to the site as it is located at one of the water sources that is a livestock concentration area, but it wasn't being damaged at that time, so it is not being revisited now, but will be sometime over the course of this next grazing permit period.

If historic properties are located during any subsequent field inventories in this area, and BLM determines that grazing activities will adversely impact the properties, mitigation will be identified and implemented in consultation with the Colorado State Historic Preservation Office (SHPO).

Environmental Consequences of the Proposed Action (Alternative A):

Direct and Indirect Effects: The direct impacts that occur where livestock concentrate, during normal livestock grazing activity, include trampling, chiseling, and churning of site soils, cultural features, and cultural artifacts, artifact breakage, and impacts from standing, leaning, and rubbing against historic structures, above-ground cultural features, and rock art (Broadhead 2001, Osbourn et al. 1987). Indirect impacts include soil erosion, gullyng, and increased potential for unlawful collection and vandalism (Broadhead 2001, Osbourn et al. 1987). Continued livestock use in these concentration areas may cause substantial ground disturbance and cause irreversible adverse effects to historic properties. Livestock management as proposed is appropriate, as long as identified grazing impacts are properly mitigated.

Cumulative Effects: Past and present land uses such as oil and gas development and livestock grazing are expected to continue to occur in the future. The livestock impacts described above, such as increased wind and water erosion, trampling, and so on will continue.

Environmental Consequences of Continuation of Current Management (Alternative B):

Direct and Indirect Effects: Continuation of the current level of livestock grazing is not expected to differ substantially from the Proposed Action in terms of its effect to cultural resources.

Cumulative Effects: Same as Alternative A.

Environmental Consequences of No Livestock Grazing (Alternative C):

Direct and Indirect Effects: While a no grazing alternative alleviates potential damage from livestock activities, cultural resources are constantly being subjected to site formation processes or events after creation (Binford 1981, Schiffer 1987). These processes can be both cultural and natural and take place in an instant or over thousands of years. Cultural processes include any activities directly or indirectly caused by humans. Natural processes include chemical, physical, and biological processes of the natural environment that impinge and or modify cultural materials.

Cumulative Effects: Cattle would not continue to contribute to cumulative impacts to cultural resources.

Mitigation: The permittee shall not do maintenance on the existing range improvement located in at T2N, R97W, Section 12, SESE, without approval from WRFO archaeology staff. The stock pond is associated with site 5RB6676, the CCC constructed check dams, and depending on the proposed work, maintenance may require SHPO consultation, and mitigation.

PALEONTOLOGICAL RESOURCES

Affected Environment: The proposed project area is located in the following formations:

- Parachute Creek Member of the Green River Formation (PFYC 5)- Contains fossil reptiles (lizards, crocodilians, turtles), bats, insects (including eggs & larvae, scorpion ants, beetles, gnats, and mosquitoes), and plants (including algae reefs, ferns, horse-tails (*Equisetum*), seeds, flowers, fruit, oaks, maples, sassafras, figs, magnolias, etc.).
- Wasatch Formation (PFYC 5)- Contains Paleocene and Eocene mammals (including perissodactyls, tapiroids, condylarths, primates, insectivores, marsupials, creodonts, carnivores, and multituberculates), reptiles (including crocodilians, turtles, and lizards), birds (including eggs), amphibians, fish, invertebrates (non-marine mollusks and ostracoda), and various floras.
- Lower part of the Green River Formation (PFYC 4)- Contains fish and ostracoda.
- Lower part of the Green River Formation and Wasatch (PFYC 5)- Contains Paleocene and Eocene mammals (including perissodactyls, tapiroids, condylarths, primates, insectivores, marsupials, creodonts, carnivores, and multituberculates), reptiles (including crocodilians, turtles, and lizards), birds (including eggs), amphibians, fish, invertebrates (non-marine mollusks and ostracoda), and various floras.
- Modern Alluvium (PFYC 2)- Contains Holocene animals, including bison and horses.

The allotment ranges from units which the BLM, Colorado State Office (COSO) has classified as PFYC 5 as they have a very high occurrence of containing scientifically significant fossils down to PFYC 2 units, which are not likely to contain significant fossils. Approximately 803 BLM administered acres in this allotment, all which are comprised of the Wasatch Formation have been designated as an Area of Critical Environmental Concern (ACEC), the Blacks Gulch ACEC, to protect the paleontological values.

Environmental Consequences of the Proposed Action (Alternative A):

Direct and Indirect Effects: In general, paleontological materials (fossils) are not considered to be endangered by normal grazing activities. Direct impacts to fossil materials may occur in areas of exposed bedrock, and where livestock congregate. Direct impacts can include damage or destruction of fossils, and the disturbance of the stratigraphic context in which they are located. Since in situ fossils are seldom encountered in alluvial areas where cattle tend to concentrate, the potential for damage to undisturbed fossil remains is low. Indirect impacts may include a reduction in vegetative cover, causing wind and water erosion, and unlawful collection. The short time period of pasture use, and pasture rotation, should have the effect of decreasing any potential damage to existing fossil resources by decreasing the time frame for impacts on any given location.

Cumulative Effects: Past and present land uses such as oil and gas development and livestock grazing are expected to continue to occur in the future. However, there should be minimal if any cumulative effects to fossil resources from livestock grazing.

Environmental Consequences of Continuation of Current Management (Alternative B):

Direct and Indirect Effects: Continuation of the current level of livestock grazing is not expected to differ substantially from the Proposed Action in terms of its effect to fossil resources.

Cumulative Effects: Same as Alternative A.

Environmental Consequences of No Livestock Grazing (Alternative C):

Direct and Indirect Effects: Direct and indirect impacts to paleontological resources from grazing activities would cease. Exposed fossil materials would still be subject to cultural and natural processes. These include any activities directly or indirectly caused by humans, and chemical, physical, and biological processes of the natural environment.

Cumulative Effects: Cattle will not continue to contribute to cumulative impacts to fossil resources.

Mitigation: The applicant is responsible for informing all persons who are associated with the project operations that they will be subject to prosecution for disturbing or collecting vertebrate fossils, collecting large amounts of petrified wood (over 25lbs./day, up to 250lbs./year), or collecting fossils for commercial purposes on public lands. If any paleontological resources are discovered as a result of operations under this authorization, the applicant must immediately contact the appropriate BLM representative.

FOREST MANAGEMENT

Affected Environment: The following table lists the woodland communities in the allotment associated with the Proposed Action.

Table 29. Woodland Communities Within Blacks Gulch Allotment

Community Type	Acres	Percent of the allotment
Pinyon Juniper	~ 10,985	45%
Douglas-Fir	~ 50	< 1%

Within the current Land Use Plan all of the pinyon/juniper woodlands in the Crooked Wash/Deep Channel Geographic Reference Area (GRA) are classified as non-commercial based on productivity and harvest suitability. These woodlands are not considered in the decadal harvest for the WRFO, and will not be managed for commercial firewood production. Woodlands in this GRA are available for harvest by private individuals. The majority of harvesting is for fuel wood and fence posts. These woodlands are available for manipulation to enhance other resource values.

The allotment also contains isolated Douglas-fir stands on steep, north and west facing slopes. No inventory has been conducted to determine the exact acres of these stands but a rough estimate would place the acreage at less than 50 (acres). These stands generally contain large old trees (>200 years). The isolated nature of the stands prevents any opportunities for stand improvement or harvest.

BLM weed crews have been treating a spotted knapweed infestation on the top of Colorow Mountain within a pinyon/juniper woodland vegetation type for several years. This control program was undertaken to prevent the knapweed from spreading in a manner similar to that occurring in the Hay Gulch area. In the Hay Gulch area leafy spurge is being treated with aerial applications of herbicides with pinyon and juniper being killed as an unintended target. The loss of these woodlands is a commitment of 200-300 years to reestablish these woodlands. Treatment in the Colorow Mountain area has been and will likely continue to be with back-pack sprayers, atv/utv, or truck mounted sprayers so unintended targets are minimal.

Environmental Consequences of the Proposed Action (Alternative A):

Direct and Indirect Effects: Livestock grazing in general has not been shown to directly impact existing pinyon/juniper woodlands. Douglas-fir stands would not be affected by grazing because of their isolated nature. Early season grazing should have no direct impact on woodland communities.

Livestock grazing may play some role in increasing invasion of pinyon/juniper woodlands on sagebrush sites by decreasing the competitive nature of native plant communities. If the early season grazing negatively affects the native species vigor, then there may be a potential for invasive species encroachment. However, the early season grazing may also provide pressure on non-native cool season species to negatively impact their growth, providing the native species with a competitive advantage for the growing season.

Cumulative Effects: Grazing also decreases fine fuel loading decreasing the intensity and frequency of fires which would kill seedling and sapling trees. Under this alternative there would be an increase in the cover and composition of desired forage species which would compete with pinyon/juniper seedlings, decreasing the rate of encroachment of sagebrush sites. There would be an increase in the litter and fine fuels potentially increasing the frequency of fires which would limit the encroachment of pinyon/juniper woodlands into sagebrush types.

Environmental Consequences of Continuation of Current Management (Alternative B):

Direct and Indirect Effects: Livestock grazing in general has not been shown to directly impact existing pinyon/juniper woodlands. Douglas-fir stands would not be affected by grazing because of their isolated nature. Livestock grazing may play some role in increasing invasion of pinyon/juniper woodlands on sagebrush sites by decreasing the competitive nature of native plant communities.

Cumulative Effects: Grazing also decreases fine fuel loading decreasing the intensity and frequency of fires which would kill seedling and sapling trees. Under this alternative there would be an increase in the cover and composition of desired forage species which would compete with pinyon/juniper seedlings, decreasing the rate of encroachment of sagebrush sites. There would be an increase in the litter and fine fuels potentially increasing the frequency of fires which would limit the encroachment of pinyon/juniper woodlands into sagebrush types.

Environmental Consequences of No Livestock Grazing (Alternative C):

Direct and Indirect Effects: The lack of livestock grazing may play some role in decreasing invasion of pinyon/juniper woodlands on sagebrush sites by increasing the competitive nature of native plant communities due to the lack of grazing pressure. There would

be a rapid increase in fine fuel loadings in the sagebrush types. If not suppressed, fire frequencies would increase significantly with sagebrush communities burning at a rate closer to the natural fire return interval for this plant community. These fires are expected to carry into the pinyon/juniper associations creating stand-replacing fires. Over the long-term pinyon/juniper woodlands would be relegated to those areas that are fire resistant such as bluffs and areas containing rimrock. The distribution of pinyon/juniper would be the same as before European influence, in theory. Large scale stand replacing fires in the pinyon/juniper type are expected to carry into the heads of the draws and also remove the Douglas-fir stands.

Cumulative Effects: With no commitment by the grazing permittee but continued commitment by the BLM the area of current weed infestations on BLM are expected to decline to a maintenance level. New weed infestations, within the pinyon/juniper woodlands, derived from the private lands are expected and without discovery could expand to the size requiring large scale herbicide application. In this case there would be a loss of woodland acreage.

Mitigation: None.

RANGELAND MANAGEMENT

Affected Environment: Refer to CO-110-2007-30-EA, page 90 for a more detailed description of the following summary. Refer to the Background/Introduction section of that EA page 1 and the Background/Introduction section above for more detailed information on the history of this allotment. From 1990 through 2006 annual use in the Blacks Gulch allotment averaged 2,246 total AUMs (BLM and private). Utilization levels especially during the droughty years 2000 – 2006) throughout much of the allotment were often heavy and mortality of forage species was evident. Through the permit renewal process, in 2008 a grazing permit with reduced permitted AUMs and revised grazing schedules was implemented in an attempt to address resource concerns (vegetation, soils, riparian). The revised grazing schedules established specific use periods by pasture that alternated use every other year to allow deferment from grazing during the critical growth period in most pastures. Permitted AUMs were also reduced in an attempt to better align with the allotment carrying capacity given that approximately 40 percent of the allotment is inaccessible to livestock due to steep slopes.

The current estimated carrying capacity of the allotment is outlined by pasture on page 99 of CO-110-2007-30-EA. The estimates of the allotment carrying capacity for an average year total 2,384 AUMs. This includes forage produced on both BLM and private lands. The grazing schedules of the Proposed Action alternative (1,834 total AUMs) and the grazing schedules of the Continuation of Current Management alternative (2,078 average total AUMs) both schedule livestock grazing below these estimated average capacities. Both alternatives are analyzed below. These proposals should meet long-term forage production and sustainability requirements for public lands to facilitate future livestock operations in a sustainable manner and address the Standards for Public Land Health.

In January 2011 the permit for the Blacks Gulch allotment (#06612) was transferred to LK Ranch Livestock LLC with its existing grazing schedules. LK Ranch has recently made application for grazing use different from that previously permitted. The current permit is

outlined in the Continuation of Current Management alternative below. The current grazing schedules allow cattle grazing for an average of 149 days through the growing season. LK Ranch has applied to use the allotment for a shorter period (92 days) in the spring and early summer as outlined in the Proposed Action alternative below. The 1997 WRFO ROD/RMP has identified minimum rest requirements for this allotment as shown in Table 30 below. The objectives are to provide forage plants with opportunity to meet their physiological requirements, improve rangeland conditions, and maintain the supply of forage at sustainable yields.

Table 30. Pastures, Rest Periods, and Rest Period Frequency

Pastures	Rest Period	Frequency
Blacks Gulch, Homestead, Wray Gulch, Middle	3/15 to 6/10	1 in 3 years
Scenery Gulch, Tschuddi Gulch, Oil Well Gulch	4/15 to 7/10	1 in 3 years

A summary of the two grazing proposals shows that the Proposed Action alternative would result in grazing at a higher intensity, early in the growing season, when soils are wet and susceptible to damage, and when livestock water is readily available, but for shorter duration with ample re-growth opportunity; and the Continuation of Current Management alternative would result in grazing at a lower intensity, later in the growing season, when soils are drier more resistant to damage, but for a longer duration, when livestock water may be limited, when there is minimal opportunity for regrowth.

Environmental Consequences of the Proposed Action (Alternative A):

Direct and Indirect Effects: Refer to the Vegetation section (page 23) of this document for more detailed analysis of rangeland vegetation impacts associated with the Proposed Action. LK Ranch has applied to graze the Blacks Gulch allotment for 92 days in the spring and early summer as outlined in the proposed grazing permit and schedules on page three of this document.

This alternative would result in: 1) increased intensity with reduced duration of grazing; 2) increased opportunity for re-growth of forage plants after the grazing period in every pasture and; 3) grazing during the critical growth period and when soils are saturated (especially the lower pastures). In every pasture the early use would require cattle to utilize the previous year's growth to varying extents for much of their forage needs. While the proposed grazing schedules do not meet the recommended rest periods outlined in the 1997 WRFO ROD/RMP, unless soil disturbance and damage to plants is excessive the brief duration of grazing and the increased opportunity for re-growth after grazing should allow for continued improvement in range conditions throughout this allotment.

Table 31 below outlines by pasture and by grazing year the opportunity forage plants have for growth before grazing and the re-growth after grazing. On average forage plants would have nine days of growth opportunity before being grazed, they would be grazed for an average of 16 days and have an average of 48 days of re-growth opportunity after being grazed before soils generally become too dry to support dependable growth.

Table 31. Growth and Re-growth Opportunity

Pasture	Even Year Scheduled Use Period	Days of growth opportunity before grazing	Days of regrowth opportunity after grazing	Odd Year Scheduled Use Period	Days of growth opportunity before grazing	Days of regrowth opportunity after grazing	Difference between years
Blacks Gulch	3/15 - 4/1	dormant	70	3/15 - 4/1	dormant	70	none
Homestead Wray	4/20 - 4/26	19	44	4/2 - 4/8	1	62	18 days
Oil Well Gulch	4/27 - 5/7	4	55	4/9 - 4/19	dormant	70	18 days
Middle	4/2 - 4/19	1	51	4/20 - 5/7	19	33	18 days
Scenery Gulch	5/26 - 6/15	24	25	5/8 - 5/25	7	45	18 days
Tschuddi Gulch	5/8 - 5/25	7	45	5/26 - 6/15	24	25	18 days

The average growth period for the lower pastures (Blacks Gulch, Homestead/Wray, Middle) is from April 1 through June 10 with some annual fluctuations in growing conditions. Livestock would graze the Blacks Gulch pasture while forage plants are still dormant. Forage remaining from the previous year and any early cheatgrass production would be the primary food source for livestock. When soils are frozen, impacts to soils and vegetation from hoof action would be negligible but when soils are thawed and saturated there is potential for damage to forage plants and soils. Potential impacts to soils due to early use during wet soil conditions are greatest in the Blacks Gulch pasture (yearly) and the Middle pasture (every other year). Due to the small size of the pasture, grazing in the Homestead/Wray pasture would be limited to seven days. Grazing intensity would be high but duration would be short and plants would have 90 percent of the growing season to grow and recover.

Use in the Middle pasture would vary where on even years it would be grazed at the beginning of the growth period but have 73 percent of the growth period to recover after grazing. On odd years it would be grazed after almost three weeks of growing season deferment and would have almost 50 percent of the growing season remaining after grazing for recovery. On odd years grazing would occur when soils are generally thawed and wet, increasing the potential for damage to forage plants and soils.

The average growth period for the upper pastures (Oil Well, Scenery and Tschuddi) is from May 1 through July 10, again with some annual fluctuations in growing conditions. On even years the Oil Well Gulch pasture would be grazed at the beginning of the growth period allowing plants the majority of the growth period for recovery. On odd years grazing would be during the dormant season requiring livestock to rely more on forage produced the previous year. This would allow forage plants the entire grazing season for growth. The Scenery Gulch and Tschuddi Gulch pastures would each support grazing for 21 days every other year. Use would occur either early in the growth period or in the middle of the growth period, both allowing opportunity for regrowth after livestock are removed from the pastures.

During the proposed use period, water would be available throughout the allotment allowing livestock to disburse widely utilizing forage resources. With improved disbursal there would be fewer areas subjected to concentrated grazing use.

The proposed grazing schedule could produce direct impacts to soils, especially in the Blacks Gulch and Middle pasture, including soil surface disruption and compaction, and damage to the roots of forage plants. Indirectly this could result in reduced infiltration, increased sediment loss, and reduced forage yields. Potential direct benefits of this schedule include brief exposure of forage plants to defoliation by livestock. Short duration of grazing before or early in the growth period would allow forage plant opportunity for regrowth after the grazing period. The AUMs scheduled under this alternative average 76 percent of the current estimated carrying capacity of each pasture. This margin allows greater flexibility when conditions require adjustments in use.

Cumulative Effects: Past and present land uses such as oil and gas development and livestock grazing are expected to continue to occur in the future and will continue to affect vegetation throughout the allotment. Potential impacts associated with oil and gas development should be addressed with project specific BMPs. It is not clear at this time if recovery during the non-grazed period will adequately negate disturbance to the finer clayey soils and vegetation of the Blacks Gulch and Middle pasture resulting from early grazing. Future monitoring will be necessary to make this determination. If recovery is adequate there would be minimal if any cumulative negative effects from the Proposed Action. Improved regrowth opportunity in the long run should result in more litter accumulation throughout the uplands to protect soil surfaces. With proactive, responsible livestock management conditions throughout much of this allotment should improve over time.

Environmental Consequences of Continuation of Current Management (Alternative B):

Direct and Indirect Effects: Refer to CO-110-2007-30-EA page 93 for detailed analysis of this alternative, listed as the Proposed Action alternative in that document. Refer to the Vegetation section (page 23) of this document for more detailed analysis of rangeland vegetation impacts associated with the Continuation of Current Management alternative.

Under this alternative the current grazing permit and grazing schedules outlined on pages six and seven of this document would remain in place. Livestock would graze the allotment for an average of 149 days through the growing season after entering the allotment either April 25 or May 25 (alternate years). This alternative would result in: 1) lower intensity, longer duration grazing with the average duration being 32 days; 2) increased opportunity for growth of forage plants before being grazed in every pasture; 3) grazing later in the growing season when soils are drier but water sources are fewer. Permitted AUMs would be approximately the same as the Proposed Action. Total scheduled AUMs would be 16 percent higher than under the Proposed Action.

These grazing schedules meet the recommended rest periods outlined in the 1997 WRFO ROD and RMP to varying degrees. When there is a lack of water, some portions of the allotment would be unusable, which would result in increased grazing pressure in areas closer to water. Where portions of the allotment are not usable due to lack of water, grazing capacity would be reduced, requiring adjustments in grazing plans. Grazing as scheduled should allow forage

plants opportunity to grow and meet their physiological needs every other year before being grazed resulting in improved range conditions throughout this allotment.

Table 32 below outlines by pasture and by grazing year the opportunity forage plants have for growth before grazing and for re-growth after grazing. Duration of grazing would range from 4 days to 83 days. The growth opportunity prior to grazing would be 54 days on even years and 66 days on odd years. The average use period would be 45 days on even years and 20 days on odd years. The average re-growth opportunity after grazing before soils generally become too dry to support dependable growth would be three days.

Table 32. Even and Odd year Growth and Regrowth Opportunity by Pasture

Pasture	Even Year Scheduled Use Period	Days of Growth Opportunity Before Grazing	Days of Regrowth Opportunity After Grazing	Odd Year Scheduled Use Period	Days of Growth Opportunity Before Grazing	Days of Regrowth Opportunity After Grazing	Days Difference Between Years
Blacks Gulch	4/25 - 6/5	24	4	6/8 - 7/1	68	0	43
Homestead	5/1 - 5/18	30	22	5/25 - 5/28	54	12	24
Wray Gulch	5/19 - 6/30	47	0	5/29 - 6/7	58	3	10
Oil Well Gulch	7/11 - 10/1	70	0	7/21 - 8/9	70	0	10
Middle	6/6 - 7/10	66	0	7/2 - 7/20	70	0	26
Scenery Gulch	7/11 - 8/22	70	0	9/11 - 10/10	70	0	60
Tschuddi Gulch	8/23 - 10/1	70	0	8/10 - 9/10	70	0	13

The average growth period for the lower pastures (Blacks Gulch, Homestead, Wray Gulch, and Middle) is from April 1 through June 10 with some annual fluctuations in growing conditions. On even years livestock would graze the Blacks Gulch pasture in the middle of the growth period. Forage plants would have more than three weeks of growth opportunity before being grazed and would have some re-growth opportunity after livestock are removed. On odd years this pasture would have basically the entire growing season for forage plants to grow before being grazed. Every year the Homestead and Wray Gulch pastures would have at least a month of growing season where forage plants could grow before being grazed. The Homestead pasture would have some regrowth opportunity after livestock are removed each year. Generally re-growth opportunity in the lower pastures would depend on late summer precipitation.

The growth period for the Oil Well Gulch, Middle, Scenery Gulch and Tschuddi Gulch pastures averages from May 1 through July 10 with some annual fluctuations in growing conditions. These pastures would all have basically the entire growing season each year for forage plants to grow before being grazed by livestock. There would be no opportunity for regrowth in these pastures except for a brief period on odd years in the Oil Well Gulch pasture and that would depend on late summer precipitation.

This alternative to varying extents meets the rest requirements outlined in the 1997 WRFO RMP/ROD in the lower pastures (Blacks Gulch, Homestead, Wray Gulch, and Middle) and fully meets these requirements in the upper pastures (Oil Well Gulch, Tschuddi Gulch, and Scenery Gulch). Under the grazing schedules of this alternative soils would generally be dry enough that disturbance from hoof action would not be a concern except at limited areas near water sources. Two drawbacks to this later grazing schedule are 1) unreliable/limited water availability in some pastures; and 2) no opportunity for livestock to utilize cheatgrass in the lower pastures to reduce its seed production.

Except on years when optimal precipitation occurs throughout the growing season, water availability will limit where livestock can graze. Water in many ponds throughout the allotment and where Scenery Gulch flows into the Middle pasture declines by early-summer (June). In the Blacks Gulch, Homestead Wray Gulch and Middle pastures, as water becomes less available, livestock would concentrate in areas with water reasonably nearby resulting in increased impacts to forage resources. Forage a greater distance from water would have limited forage utility because fewer cattle would tend to trail longer distances between forage and water. In the past, grazing use in the Oil Well Gulch pasture has been limited due to inadequate or a total lack of dependable water. Water would be less or not available in some parts of the allotment so livestock use would be more concentrated closer to the remaining water sources. Areas surrounding perennial water sources in the Tschuddi and Scenery pastures would experience heavy trailing and trampling. Past use has shown utilization of forage to be limited to those areas within reasonable distance (generally half a mile in steeper country) of remaining water sources. The ability to utilize the entire allotment with the later, longer grazing schedules of this alternative will be variable depending on water availability year to year.

Cheatgrass is prevalent throughout the lower pastures of the allotment and while the WRFO manages livestock grazing to favor native perennial forage species there is opportunity to utilize cheatgrass in these areas. Allowing livestock to graze cheatgrass in these pastures during the brief period it is green and palatable would provide forage and reduce seed production to some degree. In this general area cheatgrass usually starts active growth by early April and usually begins to mature (produce awns) by early May. Where livestock use is scheduled after early May, cheatgrass would generally be cured out and not palatable. It would have full opportunity to produce seed, providing a continued seed source. Grazing cheatgrass when it is palatable would not be a particular management tool however it would to some degree reduce seed production and make use of the forage produced.

Continuation of current management would provide native forage plants with a great degree annual deferment of grazing during the growth period. Grazing late in the growth period would also result in minimal utilization of cheatgrass because almost all grazing would be scheduled after cheatgrass has become unpalatable. Unconsumed cheatgrass would provide litter to protect soil surfaces but in excess it could accumulate in some areas providing a ready fine fuel source if fire were to occur. The AUMs scheduled under this alternative average 77 percent of the current estimated carrying capacity of each pasture. This margin allows flexibility when conditions require adjustments in use. Limited water availability in some pastures will likely require frequent adjustments.

Cumulative Effects: Past and present oil and gas development is expected to continue to some degree in the future. This use will include localized surface disturbance, vegetation removal, spread of noxious and invasive weeds and occasional disruption to livestock grazing activities. These potential impacts would generally be addressed by project specific BMPs. Livestock grazing as currently permitted would have similar but lesser impacts though with potential to influence a larger area. Livestock grazing as currently permitted would allow forage plants opportunity to grow prior to being grazed and at a level that should in most areas leave adequate litter to provide soil surface protection. Aside from potentially more trailing associated with the longer use period and travel to and from potentially fewer water sources, there should be minimal if any cumulative effects to rangeland resources under this alternative.

Environmental Consequences of No Livestock Grazing (Alternative C):

Direct and Indirect Effects: Refer to CO-110-2007-30-EA, page 104 for a more detailed analysis of the alternative summarized here. Under this alternative no grazing permit would be issued on the Blacks Gulch allotment where it is currently permitted. Without a grazing permit LK Ranch would not be able to effectively utilize the forage produced on private lands as it would not be economically or environmentally feasible to fence the private lands separate from the BLM lands. There would be a negative economic impact to their livestock operation.

Cumulative Effects: Past and present oil and gas development is expected to continue to some degree in the future. This use would include localized surface disturbance, vegetation removal, and the spread of noxious and invasive weeds. In the absence of livestock grazing there would be no impacts associated with trailing and trampling. Consumption of forage resources would be limited to slight utilization by deer and elk. As a whole, rangeland resources would improve slowly over time.

Mitigation: None.

RECREATION

Affected Environment: The Proposed Action occurs within the White River Extensive Recreation Management Area (ERMA). BLM custodially manages the ERMA to provide for unstructured recreation activities such as hunting, fishing, dispersed camping, hiking, horseback riding, wildlife viewing and off-highway vehicle use. Within the project area specifically, hunting during the big game fall hunting seasons is a very popular activity. Many hunters utilize the extensive road network in the area to access hunting areas. Hunting within Black Mountain WSA is also very popular with those seeking a more primitive, non-motorized experience.

Environmental Consequences of the Proposed Action (Alternative A):

Direct and Indirect Effects: No negative impacts to recreation in the project area are anticipated as a result of this project. One positive impact from this project however would be the elimination of grazing and cattle in the project area during fall big game hunting seasons. The elimination of grazing during this period would reduce the likelihood of conflicts and the potential for disturbance of the permittee's cattle.

Cumulative Effects: None.

Environmental Consequences of Continuation of Current Management (Alternative B):

Direct and Indirect Effects: Grazing would be allowed to continue as is, including during the popular fall big game hunting season thereby increasing the possibility of conflicts between recreationists and cattle.

Cumulative Effects: None.

Environmental Consequences of No Livestock Grazing (Alternative C):

Direct and Indirect Effects: Since there would be no livestock grazing, there would be no impacts to the WSA.

Cumulative Effects: None.

Mitigation: None identified.

AREAS OF CRITICAL ENVIRONMENTAL CONCERN

Affected Environment: The Blacks Gulch Area of Critical Environmental Concern (ACEC) lies solely within this allotment, and includes 803 BLM administered acres. It is comprised of Wasatch Formation, a PFYC 5 formation (requiring monitoring of surface disturbing activities by a paleontologist). This ACEC was designated in the 1997 White River ROD/RMP to protect “important paleontological resources and values”. There are 695 acres of the ACEC located in the Middle pasture with the other 108 acres in the Blacks Gulch pasture of the allotment. Of the 803 acre ACEC a total of 244 acres were rated as not meeting the Standards for upland soils and vegetation as a result of livestock grazing related influences.

Environmental Consequences of the Proposed Action (Alternative A):

Direct and Indirect Effects: See *Paleontological Resources* section for detailed analysis.

Cumulative Effects: See *Paleontological Resources* section for detailed analysis.

Environmental Consequences of Continuation of Current Management (Alternative B):

Direct and Indirect Effects: See *Paleontological Resources* section for detailed analysis.

Cumulative Effects: See *Paleontological Resources* section for detailed analysis.

Environmental Consequences of No Livestock Grazing (Alternative C):

Direct and Indirect Effects: See *Paleontological Resources* section for detailed analysis.

Cumulative Effects: See *Paleontological Resources* section for detailed analysis.

Mitigation: See *Paleontological Resources* section for mitigation.

WILDERNESS

Affected Environment: The 9,932 acre Black Mountain Wilderness Study Area (WSA) includes approximately 1,205 acres of the eastern portion of the Blacks Gulch allotment. Of these 1,205 acres, 1,196 acres are located in the Blacks Gulch pasture and 9 acres in the Middle pasture of the allotment. This area was designated a WSA for its pristine and undeveloped landscape that presents opportunities for solitude and primitive types of recreation. One existing range improvement (#3564), a stock pond and approximately 2,800 feet of a two-track route, occur in T2N R96W section 35, in the northwestern corner of the WSA. This two-track route is closed to motorized use, except for use by the grazing permittee for authorized purposes only while on official business (i.e. fence or stockpond maintenance). However it has been observed that this route has been used by hunters on OHVs during the fall big game hunting season. This use is considered an illegal incursion into the WSA.

Environmental Consequences of the Proposed Action (Alternative A):

Direct and Indirect Effects: No major impacts to WSAs are anticipated from this project. The portion of the allotment within the WSA is generally the steep western facing Pinyon-Juniper over story slope of Black Mountain itself. Due to steepness of the slopes and lack of palatable understory, the WSA receives negligible domestic livestock use.

Cumulative Effects: None.

Environmental Consequences of Continuation of Current Management (Alternative B):

Direct and Indirect Effects: Impacts would be similar to those under Alternative A.

Cumulative Effects: None.

Environmental Consequences of No Livestock Grazing (Alternative C):

Direct and Indirect Effects: Since there would be no livestock grazing, there would be no impacts to the WSA.

Cumulative Effects: None.

Mitigation: Proponent will install a gate, wing fence and signage on the route (associated with Range Improvement project # 3564), where the route enters the WSA, and insure it is maintained and remains closed and locked (with BLM administrative access) at all times.

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TRIBES, INDIVIDUALS, ORGANIZATIONS, OR AGENCIES CONSULTED: Refer to CO-110-2007-030-EA.

INTERDISCIPLINARY REVIEW:

Name	Title	Area of Responsibility	Date Signed
Bob Lange	Hydrologist	Air Quality; Surface and Ground Water Quality; Floodplains, Hydrology, and Water Rights;	01/17/2012
Zoe Miller	Ecologist	Areas of Critical Environmental Concern; Special Status Plant Species; Forest Management	01/10/2012
Kristin Bowen	Archaeologist	Cultural Resources; Native American Religious Concerns; Paleontological Resources	01/09/2012
Mary Taylor	Rangeland Management Specialist	Soils; Invasive, Non-Native Species; Vegetation; Rangeland Management; Wetlands and Riparian Zones; Hazardous or Solid Wastes	12/21/2011
Ed Hollowed / Lisa Belmonte	Wildlife Biologist	Migratory Birds; Special Status Animal Species; Terrestrial and Aquatic Wildlife;	01/18/2012
Chad Schneckenburger	Outdoor Recreation Planner	Wilderness; Visual Resources; Access and Transportation; Recreation,	01/09/2012
Kyle Frary	Fuels Specialist	Fire Management	12/05/2011
Paul Daggett	Mining Engineer	Geology and Minerals	01/06/2012
Janet Doll	Realty Specialist	Realty	01/06/2012
Melissa J. Kindall	Range Technician	Wild Horse Management	01/17/2012

Name	Title	Area of Responsibility	Date Signed
Mary Taylor	Rangeland Management Specialist	Project Lead – Document Preparer	01/19/2012
James Roberts	Assistant Field Manager	NEPA Compliance	01/23/2012

ATTACHMENTS:

Exhibit A: Map of the Blacks Gulch Allotment

Blacks Gulch Allotment 06612
T 1N, 2N, 3N, R95W, 96W, 97W

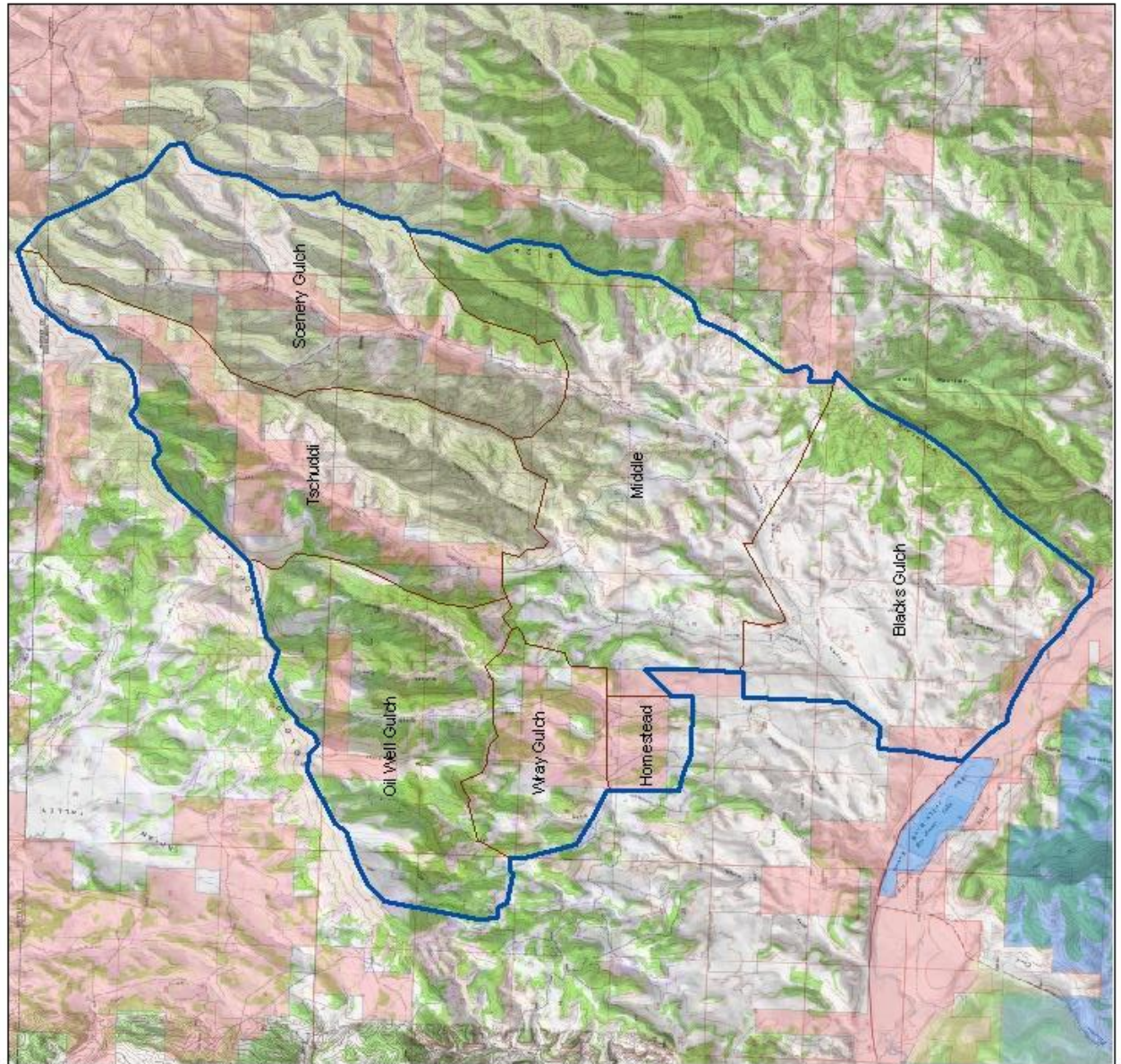
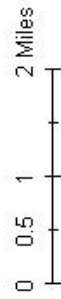


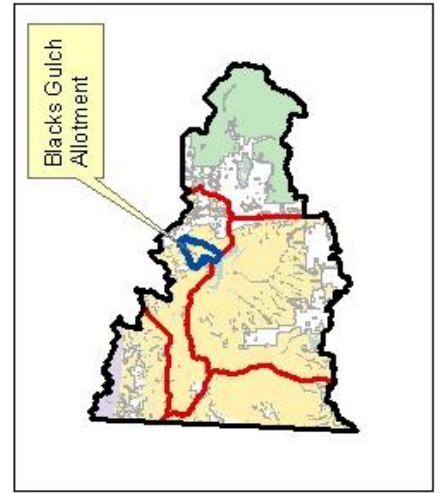
EXHIBIT A



Map Disclaimer: Although the data presented in this map, and the map itself, have been processed to the best of our ability, BLM, its servants, employees, or contractors, do not warrant the accuracy, completeness, or timeliness of the data presented, nor does the BLM or its servants, employees, or contractors, assume any liability for any errors or omissions.



November 2011



**U.S. Department of the Interior
Bureau of Land Management
White River Field Office
220 E Market St
Meeker, CO 81641**

**Finding of No Significant Impact (FONSI)
DOI-BLM-CO-110-2012-0018-EA**

BACKGROUND

The grazing permit for the Blacks Gulch Allotment (06612) was fully analyzed in CO-110-2007-030-EA and a permit issued in 2008. In 2011 the grazing preference for this allotment transferred to LK Ranch Livestock LLC. LK Ranch grazed livestock in the allotment according to the current permit (outlined in Alternative B) during the 2011 grazing season. Having gained some familiarity with the allotment LK Ranch has made application for a grazing permit with revised grazing schedules to better meet the needs of their livestock operation while still allowing for improved forage and overall land health conditions. The analysis in this document tiers to the previous EA to the extent possible and analyzes those aspects of the proposed grazing schedules that are different.

Table 1. Allotment Included in Permit #0504375

Allotment Name	Number	BLM Acres	State Acres	Private Acres	Total Acres
Blacks Gulch	06612	24,746	0	~3939	28,685

FINDING OF NO SIGNIFICANT IMPACT

Based upon a review of this EA and the supporting documents including CO-110-2007-030-EA, I have determined that the Proposed Action is not a major federal action and will not have a significant effect on the quality of the human environment, individually or cumulatively with other actions in the general area. No environmental effects meet the definition of significance in context or intensity, as defined at 40 CFR 1508.27 and do not exceed those effects as described in the White River Record of Decision and Approved Resource Management Plan (1997). Therefore, an environmental impact statement is not required. This finding is based on the context and intensity of the project as described below.

Context

The project is a site-specific action directly involving BLM administered public lands in the Blacks Gulch allotment 06612 that do not in and of itself have international, national, regional, or state-wide importance.

Intensity

The following discussion is organized around the 10 Significance Criteria described at 40 CFR 1508.27. The following have been considered in evaluating intensity for this Proposed Action:

1. Impacts that may be both beneficial and adverse.

The beneficial effects of the Proposed Action include support of the local livestock industry and increased stewardship of public lands. The authorized livestock operator has mandatory terms and conditions that must be met to maintain their grazing preference. This provides a certain level of stewardship of public lands in that if these lands were to become degraded by any activity or event, natural or human in origin, grazing and or other authorized uses would be terminated. This stewardship role of the livestock operator not only mandates proper livestock and forage management but also provides communication with the BLM as to other activities or events that could cause degradation to public lands. Adverse effects include minor impacts to soils and vegetation that will be limited in scope and are expected to be insignificant.

2. The degree to which the Proposed Action affects public health or safety.

There would be no impact to public health and safety.

3. Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.

There are no park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas in the area of Proposed Action. The proposed allotment does include a portion of the Black Mountain WSA however values such as naturalness, solitude, and opportunities for primitive and unconfined recreation will continue to persist at the same levels as identified in the initial wilderness inventory.

4. Degree to which the possible effects on the quality of the human environment are likely to be highly controversial.

Livestock grazing has occurred for many years on the Blacks Gulch Allotment #06612 and surrounding areas. The White River ROD/RMP recommends a rest rotation for this allotment from 3/15 through 6/1 every other year. While the Proposed Action does not fully implement this, the maximum annual use within the Pastures would range from 10 to 17 days out of the total 79 days of the recommended rest rotation. Thus, the Proposed Action is similar to what has been recommended for this allotment is not expected to generate controversy.

5. Degree to which the possible effects on the quality of the human environment are highly uncertain or involve unique or unknown risk.

No highly uncertain or unknown risks to the human environment were identified during analysis of the Proposed Action.

6. Degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.

The Proposed Action neither establishes a precedent for future BLM actions with significant effects nor represents a decision in principle about a future consideration. Livestock grazing of the proposed allotment has been evaluated since at least the 1981 Grazing Management EIS.

7. Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.

No individually or cumulatively significant impacts were identified for the Proposed Action. Any adverse impacts identified for the Proposed Action, in conjunction with any adverse impacts

of other past, present, or reasonably foreseeable future actions will result in negligible impacts to natural and cultural resources.

8. The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed on the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources. Same as number seven above.

9. The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act (ESA) of 1973. Neither the Proposed Action nor impacts associated with it adversely affect an endangered or threatened species or its habitat.

10. Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.

Neither the Proposed Action nor impacts associated with it violate any laws or requirements imposed for the protection of the environment.

SIGNATURE OF AUTHORIZED OFFICIAL:



Field Manager

DATE SIGNED:

01/30/2012



**U.S. Department of the Interior
Bureau of Land Management
White River Field Office
220 East Market Street
Meeker, CO 81641**



CO-110 (WRFO)
Sec 3. CF 0504375

Certified Mail No. 7011 0470 0002 4568 7622
Return Receipt Requested

January 30, 2012

LK Ranch Livestock LLC
P.O. Box 1404
Meeker, CO 81641

NOTICE OF PROPOSED DECISION

Dear Lenny:

Bureau of Land Management (BLM) White River Field Office (WRFO) has received your application for a revised grazing permit on the Blacks Gulch Allotment #06612. The application has been reviewed for conformance with 43 CFR 4110.1(b)(2)(i), 4110.1(b)(2)(ii), and 4110.1(b)(2)(iii).

The proposed grazing schedule developed by yourself and WRFO was reviewed and analyzed. Land health assessments, field observations, and other information was evaluated and reviewed for this allotment. Information provided by you through consultation was also considered in development of the proposed grazing permit.

BACKGROUND The grazing permit for the Blacks Gulch Allotment (06612) was fully analyzed in CO-110-2007-030-EA and a permit issued in 2008. In 2011 the grazing preference for this allotment transferred to LK Ranch Livestock LLC. LK Ranch grazed livestock in the allotment according to the current permit (outlined in Alternative B) during the 2011 grazing season. Having gained some familiarity with the allotment you have made application for a grazing permit with revised grazing schedules to better meet the needs of your livestock operation while still allowing for improved forage and overall land health conditions. The analysis in this document tiers to the previous EA to the extent possible and analyzes those aspects of the proposed grazing schedules that are different.

Table 1. Allotment Included in Permit #0504375

Allotment Name	Number	BLM Acres	State Acres	Private Acres	Total Acres
Blacks Gulch	06612	24,746	0	~3939	28,685

To comply with the National Environmental Policy Act of 1969, as amended, this office conducted an Environmental Assessment (EA) for the issuance of a new grazing permit to analyze and determine whether or not significant impacts would result from implementation of the proposed grazing permit. This review has now been completed in an Environmental Assessment which analyzed the proposed grazing programs as developed by BLM and yourselves. The EA resulted in a Finding of No Significant Impact. A copy of DOI-BLM-CO-110-2012-0018-EA is on file at the WRFO. The Proposed Action is subject to and has been reviewed for conformance with the following plan (43 CFR 1610.5, BLM 1617.3): White River Record of Decision and Approved Resource Management Plan (ROD/RMP), approved: July 1, 1997, pages 2-10 through 2-14, 2-22 through 2-26.

The EA analyzed three alternatives: The Proposed Action (Alternative A), The Continuation of Current Management (Alternative B), and a No Grazing Alternative (Alternative C).

The BLM is mandated by regulations to take appropriate action as soon as practicable but not later than the start of the next grazing year upon determining that existing grazing management practices or levels of grazing on public lands are significant factors in failing to achieve the Public Land Health Standards and conform with the Colorado Livestock Grazing Management Guidelines (43 C.F.R. 4180.2(c)).

Below is a brief description of Alternatives A and B in the environmental assessment.

Alternative A is your proposed grazing schedule developed to maintain areas currently meeting land health standards or maintain a trajectory towards meeting land health standards. It involves the implementation of a six pasture even and odd year rotation and takes into consideration the deferment requirements of the White River Field Office 1997 Record of Decision/Resource Management Plan (WRFO ROD/RMP) (D-14). Alternative A addresses the number of livestock, season of use, duration, frequency, and intensity of grazing use to minimize impacts to vegetation and rangeland health (Guideline 2). The tables below outline Alternative A:

Proposed Grazing Schedule – Even Years

Allotment 06612	Livestock		Date		Use Type*	Total AUMs	% PL	BLM AUMs	PVT AUMs
Pasture Name	Number	Kind	On	Off					
Blacks Gulch	600	C	3/15	4/1	A	355	93%	330	25
Middle	600	C	4/2	4/19	A	355	97%	344	11
Homestead Wray	600	C	4/20	4/26	A	138	41%	57	81
Oil Well Gulch	600	C	4/27	5/07	A	217	90%	195	22
Tschuddi Gulch	600	C	5/08	5/25	A	355	58%	206	149
Scenery Gulch	600	C	5/26	6/15	A	414	75%	311	103
Totals:						1834		1443	391

Proposed Grazing Schedule – Odd Years

Allotment 06612	Livestock		Date		Use Type*	Total AUMs	% PL	BLM AUMs	PVT AUMs
Pasture Name	Number	Kind	On	Off					
Blacks Gulch	600	C	3/15	4/1	A	355	93%	330	25
Homestead Wray	600	C	4/2	4/8	A	138	41%	57	81
Oil Well Gulch	600	C	4/9	4/19	A	217	90%	195	22
Middle	600	C	4/20	5/07	A	355	97%	344	11
Scenery Gulch	600	C	5/08	5/25	A	355	75%	266	89
Tschuddi Gulch	600	C	5/26	6/15	A	414	58%	240	174
Totals:						1834		1432	402

Alternative B is the Continuation of Current Management alternative that was analyzed in CO-110-2007-030-EA and later permitted. These grazing schedules would also progress toward meetin the Standards for Public Land Health in the Blacks Gulch allotment but do not meet the needs or objectives of LK Ranch. The table below outlines the grazing schedule for alternative B.

Current Grazing Schedule – Even Years

Blacks Gulch Allotment #06612 (Even Year)									
Pasture	Livestock		Date		Use Type*	Total AUMs	% PL	BLM AUMs	PVT AUMs
	#	Kind	On	Off					
Blacks Gulch	325	C	4/25	6/5	A	449	93%	417	32
Homestead	100	C	5/1	5/18	A	59	27%	16	43
Wray	100	C	5/19	6/30	A	141	55%	78	63
Middle	325	C	6/6	7/10	A	374	97%	363	11
Middle	100	C	7/1	7/10	A	33	97%	32	1
Scenery Gulch	325	C	7/11	8/22	A	459	75%	345	114
Tschuddi Gulch	325	C	8/23	10/1	A	427	58%	248	179
Oil Well Gulch	100	C	7/11	10/1	A	273	90%	246	27
Totals:						2215		1745	264

Current Grazing Schedule – Odd Years

Blacks Gulch Allotment #06612 (Odd Year)									
Pasture	Livestock		Date		Use Type*	Total AUMs	% PL	BLM AUMs	PVT AUMs
	#	Kind	On	Off					
Homestead	425	C	5/25	5/28	A	56	27%	15	41
Wray	425	C	5/29	6/7	A	140	55%	77	63
Blacks Gulch	425	C	6/8	7/1	A	335	93%	312	23
Middle	425	C	7/2	7/20	A	265	97%	258	7
Oil Well Gulch	425	C	7/21	8/9	A	279	90%	252	27
Tschuddi Gulch	425	C	8/10	9/10	A	447	58%	259	188
Scenery Gulch	425	C	9/11	10/10	A	419	75%	314	105
Totals:						1941		1487	327

FINDING OF NO SIGNIFICANT IMPACT

Based upon a review of this EA and the supporting documents including CO-110-2007-030-EA, I have determined that the Proposed Action is not a major federal action and will not have a significant effect on the quality of the human environment, individually or cumulatively with other actions in the general area. No environmental effects meet the definition of significance in context or intensity, as defined at 40 CFR 1508.27 and do not exceed those effects as described in the White River Record of Decision and Approved Resource Management Plan (1997). Therefore, an environmental impact statement is not required. This finding is based on the context and intensity of the project as described below.

PROPOSED DECISION

In conformance with 43 CFR 4160.1, it is my proposed decision to implement the Proposed Action (Alternative A), as mitigated in EA number DOI-BLM-CO-110-2012-0018-EA for authorization of livestock grazing use in the Blacks Gulch Allotment #06612 for a period of two years expiring January 15, 2014 as supported by 43 CFR 4130.2(d)(3). This permit can be extended for a maximum of ten years (until February 28, 2022) if LK Ranch retains a lease of the associated base property and private property within the allotment.

Grazing Permit Terms and Conditions: The following terms and conditions as required by 43 CFR 4130.3 would be included in the grazing permit issued under this alternative:

Grazing Permit Terms and Conditions:

The following other terms and conditions would be included in the grazing permit issued under this alternative:

1. Livestock grazing use will occur as outlined in the Proposed Action grazing schedules (Allotment Management Plan) portion of the Environmental Assessment document CO-110-2012-0018-EA that analyzes grazing on the Blacks Gulch Allotment.
2. The permittee or lessee must provide reasonable administrative access across private and leased lands to the BLM for the orderly management and protection of the public lands, as outlined 43 CFR 4130.3-2(h).
3. In order to improve livestock distribution on the public lands, no salt blocks and/or mineral supplements will be placed within a 1/4 mile of any riparian area, wet meadow, or watering facility (either permanent or temporary) unless stipulated through a written agreement or decision in accordance with 43 CFR 4130.3-2(c).
4. The permittee shall submit an Actual Use form within 15 days after completing their annual grazing use as outlined in 43 CFR 4130.3-2(d).
5. The permittee shall submit an Actual Use form within 15 days after completing their annual grazing use as outlined in 43 CFR 4130.3-2(d).
6. Livestock grazing on the Blacks Gulch allotment will be managed to achieve the Standards for Public Land Health in Colorado. If the proposed intensive, early livestock

use results in undesirable impacts to soils the grazing schedules will be modified to minimize this impact.

The following mandatory terms and conditions as required by 43 CFR 4130.3 would be included in the grazing permit issued under this alternative:

1. Grazing permit or lease terms and conditions and the fees charged for grazing use are established in accordance with the provisions of the grazing regulations now or hereafter approved by the Secretary of the Interior.
2. This grazing permit is subject to cancellation, in whole or in part at any time because of:
 - a) Noncompliance by the permittee/lessee with rules and regulations now or hereafter approved by the Secretary of the Interior.
 - b) Loss of control by the permittee/lessee of all or a part of the property upon which it is based.
 - c) A transfer of grazing preference by the permittee/lessee to another party.
 - d) A decrease in the lands administered by the Bureau of Land Management within the allotment(s) described herein.
 - e) Repeated willful unauthorized grazing use.
3. This grazing permit/lease is subject to the terms and conditions of an allotment management plan if such plan has been prepared. If an allotment management plan has not been prepared, it must be incorporated in this permit/lease when completed.
4. The permittee/lessee must own or control and be responsible for the management of the livestock authorized to graze under this grazing permit/lease.
5. The authorized officer may require counting and/or additional or special marking or tagging of the livestock authorized to graze under this grazing permit/lease.
6. The permittee/lessee grazing case file is available for public inspection as required by the Freedom of Information Act.
7. This grazing permit/lease is subject to the provisions of executive Order NO. 11246 of September 24, 1964, as amended, which sets forth nondiscrimination clauses. A copy of this order may be obtained from the authorized officer.
8. Livestock grazing use that is different from that authorized by a permit or lease must be applied for prior to the grazing period and must be filed with and approved by the authorized officer before grazing use can be made.

9. Billing notices are issued which specify fees due. Billing notices, when paid become a part of the grazing permit or lease. Grazing use cannot be authorized during any period of delinquency in the payment of amounts due, including settlement for unauthorized use.
10. The permittee is responsible for informing all persons who are associated with the allotment that they will be subject to prosecution for knowingly disturbing archaeological sites or for collecting artifacts. If archaeological materials are discovered as a result of operations under this authorization, the permittee must immediately contact the appropriate BLM representative.
11. Pursuant to 43 CFR 10.4(g), the permittee must notify the AO, by telephone and written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(c) and (d), the permittee must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the AO.
12. Grazing fee payments are due on the date specified on the billing notice and must be paid in full within 15 days of the due date, except as otherwise provided in the grazing permit or lease. If payment is not made within that time frame, a late fee (the greater of \$25 or 10 percent of the amount owed but not more than \$250) will be assessed.
13. No Member of or Delegate to, Congress or Resident Commissioner, after his/her election of appointment, or either before or after he/she has qualified, and during his/her continuance in office, and no officer, agent, or employee of the Department of the Interior, other than members of Advisory committees appointed in accordance with the Federal Advisory Committee Act (5 U.S. C. App. 1) and Sections 309 of the Federal Land Policy and Management Act of 1976 (43 U.S. C. 1701 et sec.) shall be admitted to any share or part in a permit or lease, or derive any such benefit to arise therefrom; and the provision of Section 3741 Revised Statute (41 U.S. C. 22), 18 U.S.C. Sections 431-433, and 43 CFR Part 7, enter into and form a part of a grazing permit or lease so far as the same may be applicable.
14. This grazing permit conveys no right, title or interest held by the United States in any lands or resources.
15. This permit is subject to (a) modification, suspension or cancellation as required by land plans and applicable law; (b) annual review and modification of terms and conditions as appropriate; and (c) the Taylor Grazing Act, as amended, the Federal Land Policy and Management Act, as amended, the Public Rangelands Improvement Act, and the rules and regulations now or hereafter promulgated thereunder by the Secretary of Interior.

RATIONALE

This proposed decision is the result of your request for a revised grazing permit to better meet the needs of your livestock operation. Your proposed grazing schedules have been analyzed and

determined to support of the local livestock industry and increased stewardship of public lands. Adverse effects to soils and vegetation will be limited in scope and are expected to be insignificant.

AUTHORITY

This proposed decision is being issued to you as an affected party under authority of 43 CFR 4160.1, and as qualified applicants under 4130.2(a) and (e). Changes being made to the existing permit, in the proposed grazing schedule are supported by regulation 43 CFR 4180.1(a) and (b) and 4180.2(c) which direct the authorized officer to take appropriate action as soon as practicable but not later than the next grazing year upon determination that existing grazing management needs to be modified to ensure the Fundamentals of Rangeland Health and Standards and Guidelines are being met. Proposed changes are also supported by 43 CFR 4180.2 (e) (1-7) and (10-12). The Proposed Action is subject to and has been reviewed for conformance with the following plan (43 CFR 1610.5, BLM 1617.3); White River Record of Decision and Approved Resource Management Plan (ROD/RMP), approved: July 1, 1997, pages 2-10 through 2-14, 2-22 through 2-26.

RIGHT OF PROTEST AND/OR APPEAL

Any applicant, permittee, lessee or other interested publics may protest a proposed decision under Sec. 43 CFR 4160.1 and 4160.2, in person or in writing to Kent Walter, Field Manager White River Field Office, 220 E. Market Street, Meeker, CO 81641 within 15 days after receipt of such decision. The protest, if filed, should clearly and concisely state the reason(s) why the proposed decision is in error.

In accordance with 43 CFR 4160.3 (a), in the absence of a protest, the proposed decision will become the final decision of the authorized officer without further notice unless otherwise provided in the proposed decision.

In accordance with 43 CFR 4160.3 (b) upon a timely filing of a protest, after a review of protests received and other information pertinent to the case, the authorized officer shall issue a final decision.

Any applicant, permittee, lessee or other person whose interest is adversely affected by the final decision may file an appeal (*in writing*) in accordance with 43 CFR 4.470 and 43 CFR 4160.4. The appeal must be filed within 30 days following receipt of the final decision or within 30 days after the date the proposed decision becomes final. The appeal may be accompanied by a petition for a stay of the decision in accordance with 43 CFR 4.471 pending final determination on appeal. The appeal and petition for a stay must be filed in the office of the authorized officer, as noted above. The person/party must also serve a copy of the appeal on the Office of the Solicitor, Rocky Mountain Region, Denver Field Office, U.S. Department of the Interior, 755 Parfet Street, Room 151, Lakewood, CO 80215. The BLM does not accept appeals by facsimile or email at this time.

The appeal shall state the reasons, clearly and concisely, why the appellant thinks the final decision is in error and otherwise complies with the provisions of 43 CFR 4.470.

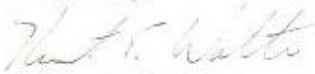
Should you wish to file a petition for a stay, see 43 CFR 4.471 (a) and (b). In accordance with 43 CFR 4.471(c), a petition for a stay must show sufficient justification based on the following standards:

- (1) The relative harm to the parties if the stay is granted or denied.
- (2) The likelihood of the appellant's success on the merits.
- (3) The likelihood of immediate and irreparable harm if the stay is not granted, and
- (4) Whether the public interest favors granting the stay.

Within 15 days of filing the appeal, or the appeal and petition for stay, with the BLM officer named above, the appellant must serve copies to any other person named in this decision and on the Office of the Regional Solicitor located at 755 Parfet St., Suite 151, Lakewood, CO 80215, in accordance with 43 CFR 4.470(a) and 4.471(b). As noted above, the petition for stay must be filed in the office of the authorized officer and served in accordance with 43 CFR 4.471. Any person named in the decision who receives a copy of a petition for a stay and/or an appeal, see 43 CFR 4.472(b) for procedures to follow if you wish to respond.

If you have any questions, contact either Mary Taylor 878-3807, or myself at 878-3800.

Sincerely,



Kent E. Walter
Field Manager